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JANUARY 1988
VOL. 47, NO. 1

HAWAII MEDICAL JOURNAL

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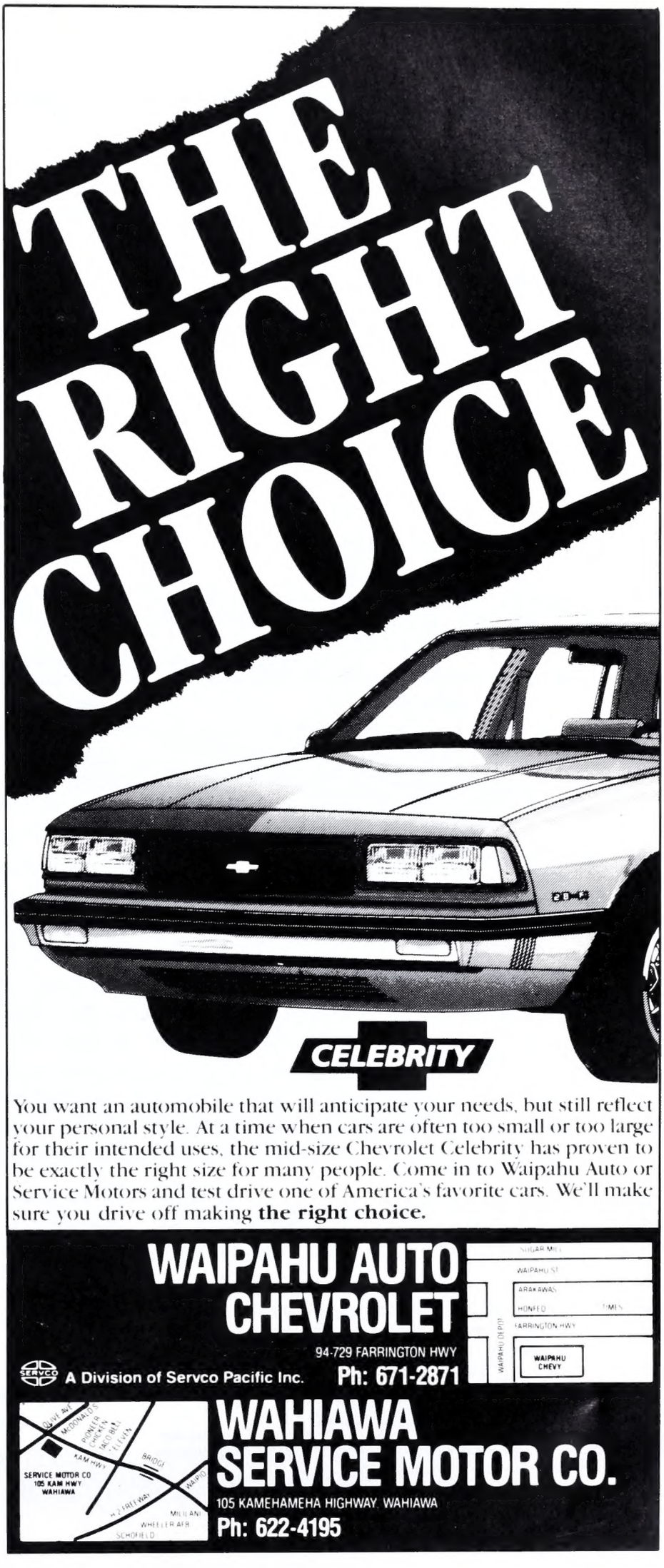
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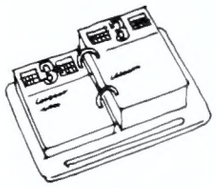
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Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS
ONGOING

For a complete list of ongoing programs, please refer to the March 1987 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Jan. 1-5, 1988	Specialties and Primary Practice, Symposium Maui Inc. and Hawaii Medical Association; Joe Harrison MD, P.O. Box 10185, Lahaina, HI 96761, 808-661-8032 or 879-8182. Location: Royal Lahaina Resort, Maui.
Jan. 3-7, 1988	Obstetrics, Perinatal Medicine and the Law, American Society of Law & Medicine, 765 Commonwealth Ave., Boston, MA 02215. Location: Hyatt Regency, Maui.
Jan. 16-23, 1988	Geriatric Medicine, University of Colorado School of Medicine, Office of CME, 4200 E. 9th Ave., Box C-295, Denver, CO 80262. Location: Kauai.
Jan. 20-26, 1988	Obstetrics and Gynecology: Practical Aspects in Patient Care, Washington University School of Medicine, Box 8063, 660 S. Euclid, St. Louis, MO 63110. Location: Stouffer Wailea Beach Resort, Maui.
Jan. 23-30, 1988	Ninth Annual Royal Hawaiian Eye Meeting, Hawaiian Eye Foundation and the Hawaii Medical Association; Mary Charles & Associates, 2334 S. King St., Suite 205, Honolulu, HI 96826, 942-9655. Location: Maui.
Jan. 24-29, 1988	19TH Congress of Pan-Pacific Surgical Association, Pan-Pacific Surgical Association; Box 553, Honolulu, HI 96809.
Jan. 24-31, 1988	Radiology for Emergency and Primary-Care Physicians, Scripps Memorial Hospital-Encinitas, Encinitas, CA and The American Institute of Postgraduate Education; Edith S. Bookstein/AIPE, P.O. Box 2586, La Jolla, CA 92038, 619-454-3212. Location: Kona Surf Resort, Big Island.
Jan. 25-29, 1988	Sixth Annual Hawaii Conference on Gastrointestinal and Hepatic Diseases, Honolulu Medical Group Research & Education Foundation and the Hawaii Medical Association; Gary Glober MD, 1380 Lusitana St., Suite 701, Honolulu, HI 96813, 808-536-1021. Location: The Westin Mauna Kea, Big Island.
Jan. 25-29, 1988	Geriatric Medicine and Nursing: Caring for the Aging Population, University of Colorado School of Medicine, Office of CME, 4200 E. 9th Ave., Box C-295, Denver CO 80262, 303-394-5195. Location: Kauai Hilton, Kauai.
Jan. 30-Feb. 2, 1988	31st Annual Pan-American Conference on Fertility and Sterility-Complete Coverage, U.S. International Foundation for Studies in Reproduction; 718-544-7599. Location: Mauna Lani Bay Hotel, Big Island.
Jan. 31-Feb. 6, 1988	Infectious Disease in General Medical and Pediatric Practice, University of Colorado School of Medicine; Office of CME, 4200 E. 9th Ave., Box C-295, Denver, CO 80262, 303-394-5195. Location: Kauai.

(Continued on page 6)

The Hawaii Medical Association does not review or evaluate all of the programs listed in the JOURNAL's Continuing Medical Education column and assumes no responsibility for changes in agenda or cancellations.



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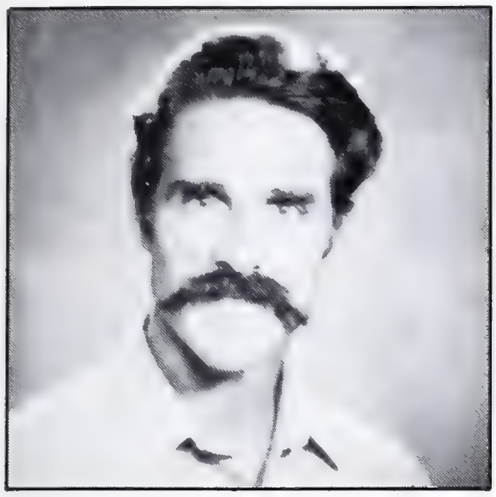
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CONTINUING MEDICAL EDUCATION

(Continued from page 4)

Feb. 2-13, 1988	Fourth Annual Retreat Complex Coronary Angioplasty, Mid American Heart Institute; 816-932-2220. Location: Westin Maui, Maui.
Feb. 4-6, 1988	Infectious Disease, University of Michigan Medical School; 313-763-1400. Location: Kahala Hilton Hotel, Oahu.
Feb. 7-11, 1988	16th Obstetric Anesthesia Conference, Ohio State University Hospital Department of Anesthesiology; 614-293-8487, Location: Sheraton Waikiki, Oahu.
Feb. 8-12, 1988	Third Annual Cardiovascular Conference at Hawaii, American College of Cardiology; 9111 Old Georgetown Rd., Bethesda, MD 20814. Location: Sheraton Royal Waikoloa Hotel, Big Island.
Feb. 8-17, 1988	Bay Cap XI: Taco IV, Baylor College of Medicine-Department of Anesthesiology; 713-799-4941, Locations: Kauai and Maui.
Feb. 15-19, 1988	Hawaii BB: Advances in Primary Care, The Pacific Institute of Continuing Medical Education and the Hawaii Medical Association; Valerie Murray, P.O. Box 1059, Koloa, Kauai, HI 96756, 808-742-7471. Location: Waiohai Resort, Kauai.
Feb. 20-27, 1988	Pediatric Emergencies, Scripps Memorial Hospital-Encinitas, Encinitas, CA and The American Institute of Postgraduate Education; Edith S. Bookstein/AIPE, P.O. Box 2586, La Jolla, CA 92038, 619-454-3212. Location: The Royal Lahaina Resort, Maui.
Feb. 22-24, 1988	Fourth Annual Midwinter Seminar, Hawaii Ophthalmological Society and Division of Ophthalmology, Department of Surgery; Malcolm Ing MD, 1319 Punahou St., Suite 1110, Honolulu, HI 96826, 808-955-5951. Location: Hyatt Regency, Oahu.
Feb. 22-26, 1988	Current Problems in Cardiology Diseases, Mayo Clinic; William L. Nietz, Division of Education, Mayo Clinic, Rochester, MN 55905, 507-284-2085. Location: Maui Marriott Resort, Maui.
Feb. 22-25, 1988	Island Symposium on Cardiac Pacing, Coronary Angioplasty and Arrhythmia Management, Cardiovascular Institute for CME and Research NASPE; 512-690-1522. Location: Sheraton Princeville, Kauai.
Feb. 29-March 4, 1988	Neurology in Clinical Practice, Mayo Clinic; 507 284-2509. Location: Kauai Hilton, Kauai.
March 2-3, 1988	Symposium on Hansen's Disease; Hansen's Disease Community Program, 735-2472. Location: To be announced.
March 1988	World Association for Infant Psychiatry and Allied Discipline, co-sponsored with Tripler Army Medical Center, Dr. Lee 808-433-6312.
March 4-8, 1988	1988 Geriatric Medicine Conference and Board Review, K. Kim, Division of Geriatric Medicine, 347 Kuakini St., Honolulu, HI 96817, 808-547-9815. Locations: Oahu and the Big Island.
March 5-12, 1988	Emergency Medicine/Critical-Care Conference, Bethlehem Israel Hospital/Rose Medical Center, 800 Clermont 330 Denver, CO 80220-3816, 800-525-5810. Location: Sheraton Kauai, Kauai.
March 6-11, 1988	Seventh Annual Masters Diagnostic Radiology Conference: CT, MRI, Ultrasound and Intervention, Pan Pacific Medical Seminars; 808-531-6471. Location: Westin Maui Hotel, Maui.
March 12-19, 1988	The Spine, Vanderbilt University Medical Center, 615-322-4030, Location: Stouffer Wailea Beach Resort, Maui.
March 16-20, 1988	Advanced Psychiatric Update, Continuing Medical Education Inc.; 800-447-4474. Location: Sheraton Kauai, Kauai.
March 20-25, 1988	Ninth Midwinter Diagnostic Radiology Conference, Loyola University of Chicago Medical Center; 312-531-3237. Location: Stouffer Wailea Beach Resort, Maui.
March 25-27, 1988	Coronary Heart Disease: Current Concepts, Medical Education Resources, 5808 S. Rapp St., Suite 202, Littleton, CO 80120, 800-421-3756 or 303-798-9682. Location: Maui Inter-Continental Wailea, Maui.
March 25-29, 1988	Emergency Care of Very Ill Child-Life Support, Resuscitation and Life-Threatening Emergency, University of Pennsylvania Children's Hospital of Philadelphia, Department of Emergency, 800-245-5976. Location: Maui Inter-Continental Wailea, Maui.
March 26-April 4, 1988	Orthopedic Emergencies, Scripps Memorial Hospital-Encinitas, Encinitas, CA and The American Institute of Postgraduate Education; Edith S. Bookstein/AIPE, P.O. Box 2586, La Jolla, CA 92038, 619-454-3212. Locations: The Waiohai and Poipu Beach Hotels, Kauai.
March 26-April 2, 1988	Behavioral Medicine for the Primary-Care Physician, Epic Expeditions and University of Arizona Family Practice and Community Medicine; 208-788-4995. Location: Kona, Big Island.
March 29-April 4, 1988	Neuropsychiatric Aspects of Language, Southern California Neuropsychiatric Institute; 800-423-9521. Location: Sheraton Royal Waikoloa, Big Island.



FROM THE DIRECTOR OF HEALTH

Hepatitis B in Hawaii

There is a bloodborne disease within our midst which, though not attracting as much attention as AIDS, is still having significant impact upon the health of the people in our community. This disease is hepatitis B. Unlike the situation with AIDS, there is a safe and effective vaccine available that can be used in a preventive program against hepatitis B.

Most physicians are familiar with the symptoms of acute hepatitis B, which usually runs a self-limited and non-fatal course. However, the problem of hepatitis B in Hawaii might be compared to a smoldering volcano. Acute cases of hepatitis B or cases of hepatocellular carcinoma resulting from hepatitis B represent eruptions of the volcano. Fueling the volcano is the population of hepatitis B carriers in Hawaii.

It is estimated that the hepatitis B carrier rate in Hawaii is 2% to 4%. The hepatitis B carrier rate is 0.1% to 0.5% for the continental United States, which is considerably lower than in Hawaii. Hawaii's moderately high hepatitis B carrier rate is in part due to recent and past immigration from the Western Pacific and Asia, regions where the hepatitis B carrier rates are high.

Hepatitis B carriers, though often asymptomatic, have the potential of spreading the disease to others. Hepatitis B carriers also are at increased risk of morbidity and mortality from chronic liver disease and liver cancer. One estimate has been made that 25% of infants who become chronic carriers as a result of perinatal infection, will develop cirrhosis or liver cancer later in life. Based upon a large prospective study in Taiwan, it has been estimated that male Chinese hepatitis B carriers have a 40% to 50% lifetime risk of dying from cirrhosis and/or liver cancer.

A hepatitis B carrier is defined as a person who remains hepatitis B surface-antigen (HBsAg) positive on serologic testing for six months or more. HBsAg has been found in almost all body fluids, including blood, saliva, semen, vaginal secretions, and breast milk. Transmission may occur by percutaneous or permucosal exposure to an infected person's blood or body fluids.

Sexual transmission does occur also. Perinatal transmission is an important route of spread, especially in Asia. Individuals who live in a household with a hepatitis B carrier are at increased risk of contracting the disease, probably as a result of unknowingly coming into contact with the carrier's infected blood and body fluids. The disease is felt to be 30 times more contagious than AIDS.

The Hawaii State Department of Health in December 1985 initiated the Hepatitis B Perinatal Program, with the objective of reducing the perinatal spread of hepatitis B, as a first step in controlling hepatitis B in Hawaii. As of September 1987, 322 pregnant women have been identified to be hepatitis B carriers and are registered in the program. Seventy-two percent of the identified hepatitis B carrier pregnant women were born in Asia or the Western Pacific; 21% of the identified carrier pregnant women were born in Hawaii. Infants born to the hepatitis B carrier women were started on the hepatitis B immunization series. So far, 198 infants have completed the hepatitis B vaccination series.

Prenatal screening for hepatitis B is not yet mandatory in Hawaii. However, prenatal hepatitis B screening has become a more common practice among practitioners in the community. The 1987 legislature enacted a bill enabling the Department of Health to adopt rules necessary to provide appropriate hepatitis B screening of pregnant women, including reporting and follow-up procedures for infants born to hepatitis B carrier mothers. The Department of Health is in the process of scheduling a public hearing, after which, as the Director of Health, I will immediately adopt rules mandating prenatal hepatitis B screening of pregnant women in Hawaii.

Perinatal transmission of hepatitis B is only a part of the hepatitis B problem in Hawaii. Individuals living with a hepatitis B carrier are at increased risk of infection. There is the problem

(Continued on page 8)

DIRECTOR OF HEALTH

(Continued from page 7)

of carriers and susceptible individuals in high-risk groups, such as immigrants and refugees from Asia and the Western Pacific. Many people are at increased risk of infection because of their occupation.

The Department of Health has initiated a hepatitis B vaccination program for its high-risk employees, and encourages hospitals to develop programs for hepatitis B vaccination of health-care workers. Concern has been expressed by teachers and others working in preschool or special-education settings, personnel who might be exposed to behaviorally aggressive hepatitis B carrier children who engage in biting and scratching, such as the mentally retarded. There is also the potential of transmission of hepatitis B to classmates in such situations.

In terms of risk to physicians, one nationwide survey concluded that, on average, physicians are over five times more likely to have been infected with hepatitis B than are first-time blood donors. In the course of their careers, at least one in six physicians may become infected with hepatitis B. In some fields of medicine, as much as 50% of physicians may have become previously infected; some 5% to 10% of these may become "carriers."

Because a large proportion of all cases of hepatitis B are subclinical, physicians run a risk of carrying an infection without their knowledge and, in turn, of infecting family members or patients. Only hepatitis B vaccination can protect physicians against the possible legal and financial risks arising from transmitting hepatitis B in medical settings. ***The Department of Health strongly recommends that all physicians be vaccinated against hepatitis B as soon as possible.***

Future studies are needed in order to obtain more reliable figures concerning the extent of the hepatitis B problem in Hawaii. Studies on the prevalence of hepatitis B in Hawaii so far have been inadequate. Questions are being raised as to whether other high-risk population groups in Hawaii, such as immigrants, refugees, gay and bisexual men, heterosexuals with multiple partners and parenteral drug-users should be aggressively targeted for hepatitis B screening and immunization.

An issue being discussed increasingly is the identification, treatment and follow-up of hepatitis B carriers. Many people in high-risk population groups are currently not being screened for hepatitis B, and many of those who are identified to be carriers are probably not receiving regular medical follow-up.

Because hepatitis B carriers are at increased risk of serious liver disease and hepatocellular carcinoma, they should have regular medical follow-up and laboratory testing to monitor changes in liver enzymes and increases in alpha-fetoprotein. If indicated, radionuclide liver scanning or liver ultrasonography should be performed, since early detection can result in excellent chances of cure.

Hepatitis B is a serious public health problem in Hawaii. Both the public and health-care practitioners need to be more cognizant of the ramifications of this infectious disease and of the preventive measures available.

If you want more information, contact Dr. Alan Taniguchi, Hepatitis B Perinatal Program, Epidemiology Branch at the Hawaii State Department of Health, 548-5986. I'd like to thank Alan and Chris Nevin-Woods, DO MPH, Chief of the Division of Communicable Diseases, for their assistance in preparing this information and for their dedication, along with others in their division, in developing active programs in hepatitis B surveillance, education and prevention.

John C. Lewin MD
Director of Health

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CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

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Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

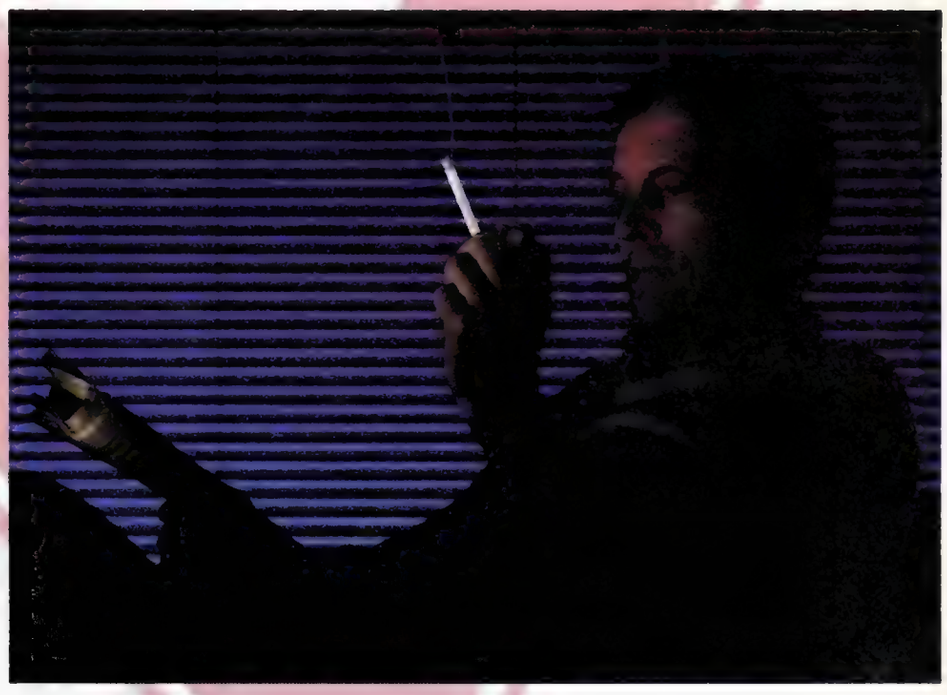
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References:
1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

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Congratulations!

The JOURNAL, on behalf of the HMA, wishes to congratulate Kinau Boyd Kamalii on her being appointed by Gov. John Waihee to the directorship of SHPDA.

We quote from Hawaii Health Planning News, Vol. X, No. 12, June 1987 in part:

"Gov. John Waihee has appointed Mrs. Kinau Boyd Kamalii as the SHPDA administrator. She started on June 1 and is quickly learning her new role. 'It's such an exciting and challenging role and I'm so glad to be a part of the governor's new beginning,' were her first comments.

"Mrs. Kamalii is best known for her role in the State House of Representatives where she served from 1974 to 1982 and 1984 to 1986. During her 10 years in office she served in various leadership positions, and was an active member of the powerful House Finance committee.

"She has been active in the community and has held offices in the Prince Kuhio Hawaiian Civic Club, Waikiki Community Center, Hawaii School of Clinical Psychology, Kamehameha Day Celebration Commission, Friends of Iolani Palace, and Punahou Alumni Association.

"Numerous honors and awards have been bestowed on her for her active and dedicated service. Among these are 'Outstanding Hawaiian of the Year' (1984), and 'Outstanding Hawaiian Woman Award' (1982). She is listed in *The World Who's Who of Women, Who's Who in American Politics* and *Who's Who in Hawaii.* She has also written several articles and publications.

"From 1981 to 1983, Mrs. Kamalii received a presidential appointment to chair the Native Hawaiian Study Commission (NHSC) and was mandated to prepare a congressional report on the statewide needs of Native Hawaiians."

Kinau Boyd Kamalii may well bring her expertise in Hawaiian culture to bear on the particular problems of the health of native Hawaiians, while at the same time directing her attention to what's best for the health of our greater community.

J.I. Frederick Reppun MD
Editor

Report of the Editor

The third year of this editorship has flown by as rapidly as, if not more rapidly than, the second. In rereading last year's annual report, published in the JOURNAL's December 1986 issue, Vol. 45, No. 12, page 422, it becomes obvious that the exact same words could be repeated here. However, the exception would be to extend kudos to Judi Kingrey, who replaced Jennilyn Etrata as editorial assistant (Judi, by reason of her husband's military transfer to San Diego, has left HMA, much to our regret).

Once again, we extend our and HMA's appreciation to the staff at 320 Ward Ave. for its generous assistance to the JOURNAL, the official organ of the Association. The same goes for Henry Yokoyama, chairman of the Publications Committee and author of the inimitable *News & Notes;* to the other members of the Committee; and to contributors of articles, LTTE, editorials and special columns in the JOURNAL.

Special kudos go to Charlotte Beal, who was rightfully appointed Managing Editor and who tremendously eased my editorial responsibilities by her interest in and hard work for the JOURNAL. (Regretfully, Charlotte too,has left HMA to pursue other interests. We wish her well.)

Finally, it again gives us pleasure to acknowledge the friendly and cooperative relationship between the HAWAII MEDICAL JOURNAL and Steve Lent and Crossroads Press Inc.

As for our budget recommendation? No dollars, but please remember that this tail continues to wag the HMA dog!

J.I. Frederick Reppun MD
Editor

Treating Hypertension in the Elderly in Hawaii

Helen Petrovitch MD*
J. David Curb MD**

It is widely believed that in response to emerging scientific evidence, treatment for elderly hypertensives has changed dramatically over the past decade, but little data exists on physician practice patterns in Hawaii.

Review of the literature reveals that there is currently little scientific evidence that antihypertensive medications are efficacious in reducing the morbidity and mortality associated with isolated systolic hypertension (ISH). On the other hand, there is some evidence that treatment of very mild diastolic hypertension in older individuals is beneficial.

A poll was conducted of members of the Hawaii Chapter of the American College of Physicians (ACP) to determine what the standard of care is in Hawaii with respect to the treatment of elderly individuals with these two types of hypertension.

Hawaii ACP members who responded to this poll generally favored treating ISH with antihypertensive medications (79% in favor; 21% against).

The Hawaii respondents were much more evenly divided over the issue of treating mild diastolic hypertension in the elderly, 55% in favor and 45% against. The level of systolic pressure at which therapy with antihypertensive medications would be instituted by 75% of the respondents was 170 mmHg for individuals less than 70 years old, and 180 mmHg for those older than 70.

Respondents favored thiazide diuretics as the step-one medication of choice in elderly patients with hypertension. Beta-blockers were the most popular step-two medication. These two types of drugs were recommended by the 1985 National Statement on Hypertension in the Elderly as first- and second-line drugs, respectively. It also recommended reduced starting doses of all antihypertensive medications given to the elderly.

Thus it appears that Hawaii's patterns, as elsewhere in the nation, may not be entirely based upon strong scientific evidence. Studies currently under way may help resolve this conflict.

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We would like to thank Eve Swiaki of the American College of Physicians for kindly providing us with data on characteristics of the Hawaii A.C.P. membership.

Introduction

It is said that by the year 2000 the number of Americans over the age of 65 will be over 30 million. At present, the leading cause of death in men and women over 55 years of age in this country is cardiovascular disease.[1] Hypertension is one of the three major risk factors for coronary artery disease and the leading risk factor for cerebral vascular disease. The prevalence of borderline or definite hypertension in the U.S. geriatric population is greater than 50% in some studies.[2] The group with mild hypertension (diastolic BP 90-104) contributes about 60%

of the mortality associated with blood-pressure elevation.[3] In addition, ISH has a prevalence rate of 5% to 20% in elderly individuals, depending on age,[4] and has been shown to carry a risk at least equal to that of diastolic hypertension.[5-10]

Hypertension has become a major health problem among our nation's elderly. Unfortunately, the benefit of antihypertensive medication in this age group has been much less intensively studied than it has been in the middle-aged population. Consequently, there remains significant debate over the treatment of ISH (systolic BP greater than or equal to 160 mmHg, with diastolic BP less than 90 mmHg) and very mild diastolic hypertension (diastolic BP 90-94 mmHg). In both areas there is insufficient evidence from clinical trials to determine conclusively whether antihypertensive medications will reduce the risk of associated cardiac or cerebral events in the elderly or, if they can, whether this reduction will outweight possible side effects from the medications. Physicians vary widely with respect to their approaches to these patients. In order to learn about the standard of care in Hawaii with respect to these problems, members of the Hawaii Chapter of the American College of Physicians were polled by mail.

Methods and Procedures

A single, two-page questionnaire, with a prepaid return mail envelope enclosed, was mailed to each Hawaii ACP member or associate in January to March 1986. The physicians were asked to answer a series of questions designed to determine their patterns of practice in regard to the treatment of ISH and of mild diastolic hypertension in individuals aged 60 or older. A cover letter from the study investigator explained the aims of the study. Out of 343 questionnaires mailed, 120 were returned (35% response rate). Thirteen of these were incorrectly completed. Thus, 107 questionnaires were actually analyzed.

Results

The age of the physicians among the 107 ranged from 26 to 69. Twenty-two were 50 or more years old; 85 were under 50. Sixteen respondents were women and 91 were men. Seventy-eight respondents were internists; of the 28 subspecialists, seven were cardiologists, six were oncologists, five were pulmonologists, two were gastroenterologists, two were endocrinologists, and one each specialized in neurology, nuclear medicine, rheumatology, infectious disease, geriatrics, and general practice. The respondents differed from the spread of the Hawaii ACP membership in that approximately 50% of Hawaii ACP members are subspecialists, whereas only 26% of respondents reported being subspecialists.

The respondents' views on treatment of hypertension are summarized in Table I.

Among these respondents, 73% said that their management of elderly patients with ISH differed from that for diastolic or combined systolic/diastolic hypertension.

For asymptomatic patients aged 60 or over; with sustained ISH (diastolic blood pressure less than 90 mmHg, systolic blood pressure 160-200 mmHg) 79% said they used drug therapy. However, only 55% said they used drug therapy for asymptomatic patients aged 60 or over who had diastolic blood pressure in the 90-95 mmHg range and systolic pressure less than 160 mmHg.

TABLE I

Questionnaire

	Yes	No
1. Is your management of elderly patients with isolated systolic hypertension different from that for diastolic or combined systolic/diastolic hypertension?	73%	27%
2. For asymptomatic patients aged 60 or over; with standard isolated systolic hypertension, diastolic blood pressure less than 90 mmHg, systolic blood pressure 160-200 mmHg; do you use drug therapy?	79%	21%
3. Do you use drug therapy for asymptomatic patients aged 60 or over with diastolic blood pressure in the 90-95 mmHg range with systolic pressure less than 160 mmHg?	55%	45%
4. Do you believe non-pharmacological therapy should be tried first:		
a. In most patients with isolated systolic HTN?	92%	8%
b. In most patients with combined systolic/diastolic HTN?	90%	10%

Thus, Hawaii respondents generally seemed to favor treating ISH with antihypertensive medications, but were much more evenly divided over the question of treating mild diastolic hypertension in the elderly. The respondents seemed to feel than non-pharmacological intervention was a good first approach for either type of hypertension. Ninety-two percent of respondents believed non-pharmacological therapy should be tried first in most patients with ISH, and 90% recommended this type of initial therapy in most patients who had combined systolic/diastolic hypertension.

Among the three types of non-pharmacologic techniques listed on the questionnaire, low-sodium diet was the choice of 105 respondents (98%); weight loss, 102 respondents (95%); and exercise, 90 respondents (84%).

Other non-pharmacological therapies written in by varying

(Continued on page 14)

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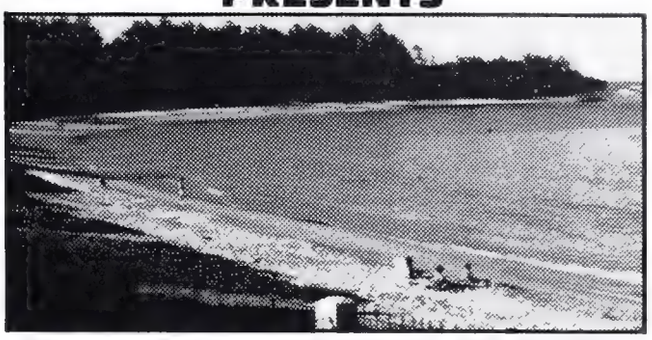
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numbers of respondents included avoidance of cigarettes and alcohol, stress reduction, etc. as shown in Table II.

The mean levels of systolic and diastolic blood pressure that were considered the upper limits of normal, and above which antihypertensive medications were allegedly prescribed, are illustrated in Figures 1 and 2 according to various age groups. For ISH, in the age group 60 to 69, 75% of respondents would have initiated antihypertensive medications at or below a systolic BP (sBP) of 170 mmHg. For patients 70 or more years old, 75% of respondents would have initiated treatment at or below sBP of 180 mmHg. Ninety percent of respondents would have initiated treatment at or below sBP of 180 mmHg in the 60- to 69-year-old group, 190 mmHg in the 70- to 79-year-old group and 195 mmHg in those older than 80.

For diastolic hypertension, in those individuals 60 to 79 years old, 75% of respondents would have initiated antihypertensive medications at or below diastolic blood pressure (dBP) 100 mmHg and 90% would have initiated treatment at or below dBP 105 mmHg. In those patients 80 years old or older, 75% of respondents would have initiated treatment at or below dBP 105 mmHg and 90% at or below dBP 110 mmHg.

Table III shows the antihypertensive medications most frequently prescribed as first- and second-line medications for ISH and for combined systolic/diastolic hypertension. Thiazide diuretics were by far the most popular first-line medications for both types of hypertension, followed by beta-blockers. These two were followed by central adrenergic inhibitors.

TABLE II

Non-Pharmacological Intervention for Hypertension

	Listed Responses	No. of Respondents
1.	Low sodium diet	105
2.	Weight loss	102
3.	Exercise	90
	Other (Write-in) Responses	
1.	Stop smoking	8
2.	Decrease in alcohol	7
3.	Control of life stress	7
4.	Decrease caffeine	6
5.	Biofeedback/relaxation techniques	5
6.	Increase calcium	4
7.	Low-fat, zero-cholesterol diet	2
8.	Increase potassium	1
9.	Increase alpha omega fatty acids	1

Discussion

In the present study we have noted that Hawaii ACP members responding to the survey very much favored treating isolated systolic hypertension with antihypertensive medications. The respondents were more evenly divided over the issue of treating mild diastolic hypertension. Hawaiian respondents also overwhelmingly favored a trial of non-pharmacological therapy first, for both isolated systolic and combined systolic/diastolic hypertension.

A similar poll conducted at Rutgers Medical School included New Jersey internists, subspecialists and family practitioners.[11] The poll was concerned only with isolated systolic hypertension. Eighty-eight percent of New Jersey respondents stated they would use antihypertensive medications for ISH as compared with 79% of Hawaii respondents. New Jersey respondents were even more convinced than Hawaii respondents that ISH should be treated with antihypertensive medications. The levels of systolic blood pressure at which antihypertensive medications would be instituted were exactly the same in New Jersey as in Hawaii. Seventy-five percent of the New Jersey respondents would have initiated therapy at or below a systolic blood pressure of 170 mmHg in those less than 70 years old and at or below 180 mmHg in those 70 or more years old. Drug preference was also very similar in New Jersey and Hawaii respondents; diuretics and beta-blockers were the most popular for the treatment of ISH.

Caution must be used in interpreting the results of such mail surveys due to the selective nature of the survey audience and of respondents to such polls. However, the results of the study correspond to several clinical impressions of Hawaii's practice patterns and there is no indication of any serious bias.

Isolated Systolic Hypertension in the Elderly

Isolated systolic hypertension has been shown by numerous reports to be common in elderly individuals (5% to 20% depending on the age)[4]. It has also been shown to be a definite risk factor for cerebrovascular and coronary morbidity as well as overall mortality[5-10]. Side effects from antihypertensive medications are said to be frequent in the elderly, and no clinical trial has yet been completed that has demonstrated the efficacy of antihypertensive medications in preventing these complications. Since there is reason to believe that the physiologic basis of ISH is different from that of diastolic hypertension or combined hypertension,[12] it is possible that response to treatment may differ in these entities. The Systolic Hypertension in the Elderly Program (SHEP), an NIH-sponsored, multicentered, placebo-controlled clinical trial of treatment of ISH was initiated in 1985 and will complete recruitment this year[13]. At its completion in 1991 we hope to obtain an answer to this important question. (There is a clinical center for SHEP located in Honolulu.)

Mild Hypertension in the Elderly

A total of seven major clinical trials have been completed that examine the efficacy of antihypertensive medications in patients with mild hypertension (dBP range 90-119)[14-21]. Most of these trials focused primarily on middle-aged individuals. Only the European Working Party trial recruited exclusively individuals over 60 years of age and had no age limit on recruitment (mean age 72)[21]. No other trial has included patients over age 69 at the time of recruitment or had a mean age above 52. The Hyper-

TABLE III

Most Frequently Prescribed Antihypertensive Medications

		For isolated systolic hyperetension?	For combined systolic/diastolic hypertension?
A. What drug would you choose as first-line medication?			
1. *Diuretics*		66	67
thiazides	(11)		
hydrochlorothiazide	(20)		
chlorthalidone	(1)		
aldactazide	(1)		
maxide	(1)		
dyazide	(8)		
2. *Beta-adrenergic blockers*		14	20
atenolol	(7)		
propranalol	(3)		
labetalol	(4)		
3. *Alpha-1 adrenergic blockers* prazosin		7	8
4. *Vasodilators*		7	4
hydralizine	(6)		
5. *Central adrenergic inhibitors*		4	4
clonidine	(5)		
methylodopa	(3)		
6. *Angiotensin-coverting* enzyme inhibitors		3	5
captoril	(3)		
7. *Calcium channel blockers*		3	1
nifedapine	(1)		
B. What drug would you choose as second-line medication?			
1. *Beta-adrenergic blockers*		43	52
atenolol	(9)		
labetalol	(8)		
propranalol	(9)		
2. *Central adrenergic* inhibitors		19	15
methyldopa	(16)		
clonidine	(18)		
3. *Diuretics*		15	14
thiazides	(3)		
hydrochlorothiazide	(4)		
dyazide	(1)		
4. *Angiotensin-converting* enzyme inhibitors		11	13
5. *Alpha-1 adrenergic blocker* prazosin		10	14
6. *Vasodilators*		9	10
hydralizine	(14)		
7. *Calcium channel blockers* nifedapine		5	5
8. *Peripheral adrenergic* antagonists (reserpine)		1	2

tension Detection and Follow-up Program (HDFP) did, however, report on a subgroup analysis of those aged 60 to 69[20].

The VA and Public Health Service trials recruited individuals, mean age 51 and 44, respectively, with dBP in the 90-114 mmHg range[14,15]. These trials had too few patients with mild hypertension to provide statistically significant data, and could supply virtually no data on older individuals. In general they tended to show protection against overall cardiovascular morbidity, but not against coronary morbidity or mortality. The remaining five studies all showed a reduction in cerebrovascular deaths in the actively treated (or Stepped Care in HDFP) groups. These studies differed, however, with respect to their results for total mortality and cardiovascular morbidity and mortality.

The Oslo study did not recruit patients over age 49 (mean age 45). There were 785 participants with dBPs 95-110 mmHg. The study was an "unblinded" treatment versus no treatment design and showed no effect on cardiovascular morbidity or mortality, and no effect on overall mortality with treatment[16].

The Australian Therapeutic trial of mild hypertension included 3,427 individuals with dBP 95-110 mmHg, with a mean age of 50. The design was single, blind, placebo-controlled and the results showed a significant reduction in mortality in the

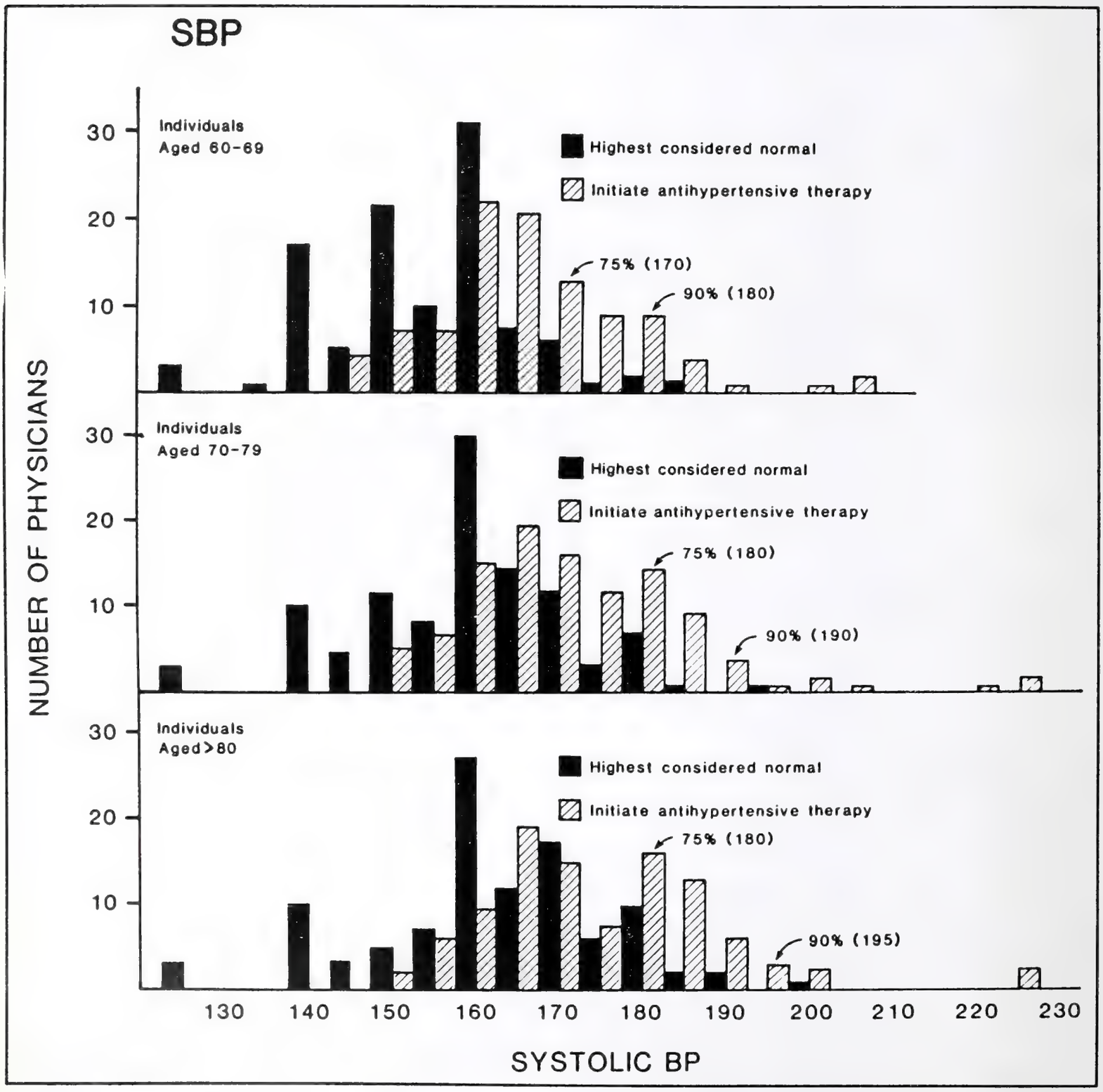


FIGURE 1

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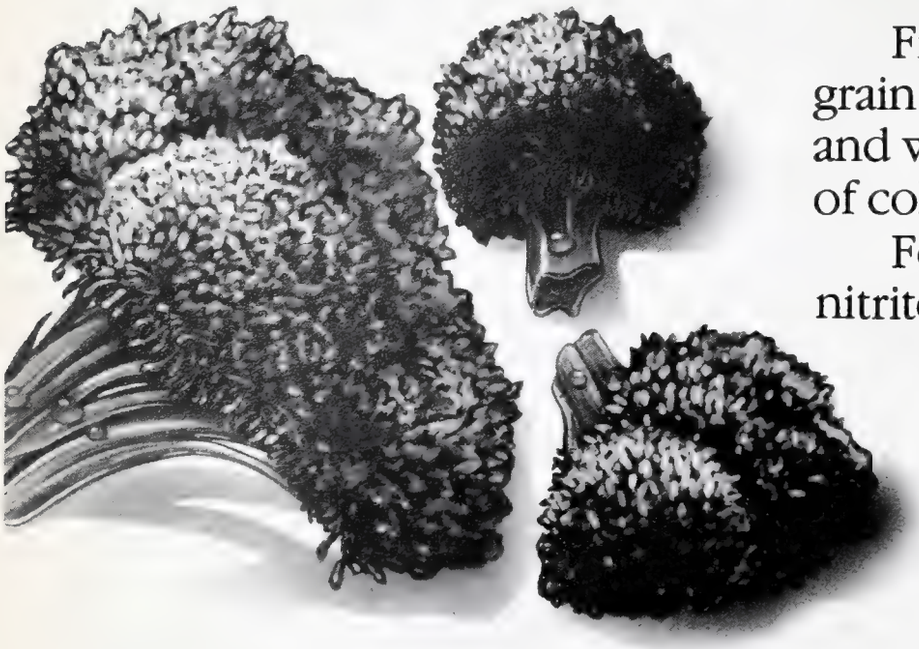
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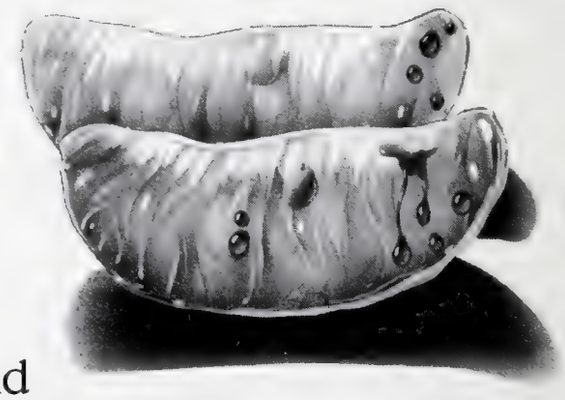
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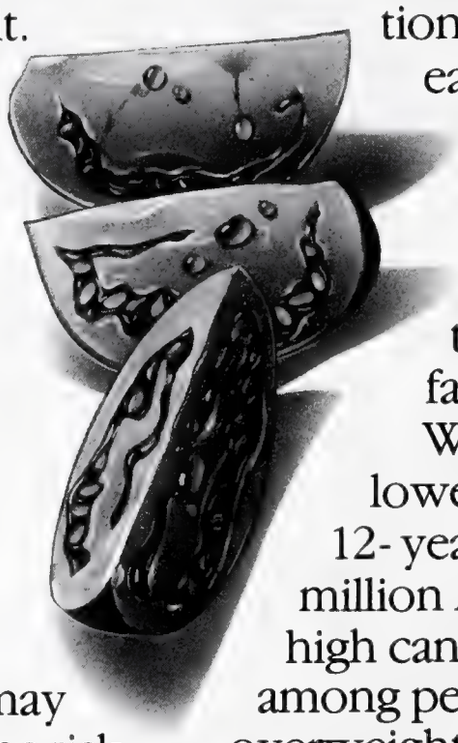
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actively treated group mainly due to a reduction in deaths caused by cardiovascular disease[17]. This result is in contrast to the Oslo study.

The Medical Research Council trial (MRC) included 17,354 individuals with a mean age of 52 and dBP 95-109. The design was double-blind, placebo-controlled. This trial showed no effect on overall mortality or coronary mortality with active treatment; however, the incidence of stroke was significantly reduced in the active treatment group[18].

The Hypertension Detection and Follow-up Program (HDFP) reported important information with respect to the problem of mild hypertension in elderly individuals because it has analyzed data on the subgroup of individuals aged 60-69 and also those individuals of all ages with BP in the 90-94 mmHg range[20,28].

The study recruited 7,825 individuals with average age 55 and dBP 9-104. The design compared a systematic antihypertensive treatment program (stepped care) to community medical therapy (referred care). Blood pressure was better controlled in the stepped-care than in the referred-care group. The findings included a decreased all-cause mortality rate, as well as decreased cerebrovascular and coronary mortality rates with stepped care. A decrease in all-cause mortality of similar magnitude was also found in the total substratum of participants with DBP in the 90-94 mmHg range[19]. The number of older patients in that BP strata, however, was too small for analysis. The all-cause mortality rate was found to decrease with stepped care in the subgroup aged 60 to 69, although this decrease was greater in the subgroup aged 50 to 59 (16.4% and 25.3%, respectively).

The European Working Party (EWP) on High Blood Pressure in the Elderly Trial included 840 participants with a mean age of 72 and dBP 90-119 mmHg. The study design was double-blind, placebo-controlled. Results showed no significant change in total mortality but a significant decrease in the cardiovascular mortality rate with treatment. This decrease was largely due to a decrease in the coronary heart disease mortality rate. This decrease in cardiovascular mortality also was present in the subgroup with dBP 90-99 mmHg[21].

The conflicting data presented here along with the fact that most of these trials dealt with individuals younger than 60 years old, and only one trial reported results for individuals with DBP 90-94, makes it difficult to draw any definite conclusions about the efficacy of antihypertensive medications for elderly individuals with DBP 90-94 mmHg.

There is some evidence, however, that treatment may be beneficial in this group. There was a decrease in all-cause mortality found in both HDFP subgroups: (1) participants with dBP 90-94 and (2) participants aged 60-69 with dBP 90-104[19,20,28], and the results of the EWP trial showed decreased cardiovascular mortality in the actively treated group of elderly individuals including the subgroup with dBP 90-99 mmHg[21].

Antihypertensive Medications in the Elderly

Elderly patients with hypertension tend to have a normal cardiac output and elevated peripheral resistance in contrast to the younger hypertensive who has an elevated cardiac output with normal peripheral resistance[22].

Thus, vasodilators have the theoretical advantage of correcting the underlying physiological abnormality in the elderly patient. It has also been reported that reflex tachycardia, which is often a problem with these agents in younger individuals, is not as common in elderly individuals due to decreased baroreceptor activity, but does occur[23]. These agents show promise; however, they are not yet available in once-a-day dosage regimens, which can cause problems with compliance. The thiazide diuretics are recommended as the first-line drugs of choice and the beta-blockers as useful second-line medications, along with the central adrenergic inhibitors, by the 1985 National High Blood Pressure Council Statement on Hypertension in the Elderly[24].

The thiazide diuretics have been shown in numerous trials to be highly efficacious in elderly patients[25,26,27]. They can be given as infrequently as every other day and are also very inexpensive medications.

The beta-blockers have the theoretical disadvantage of possibly decreasing an already low cardiac output in the elderly

(Continued on page 20)

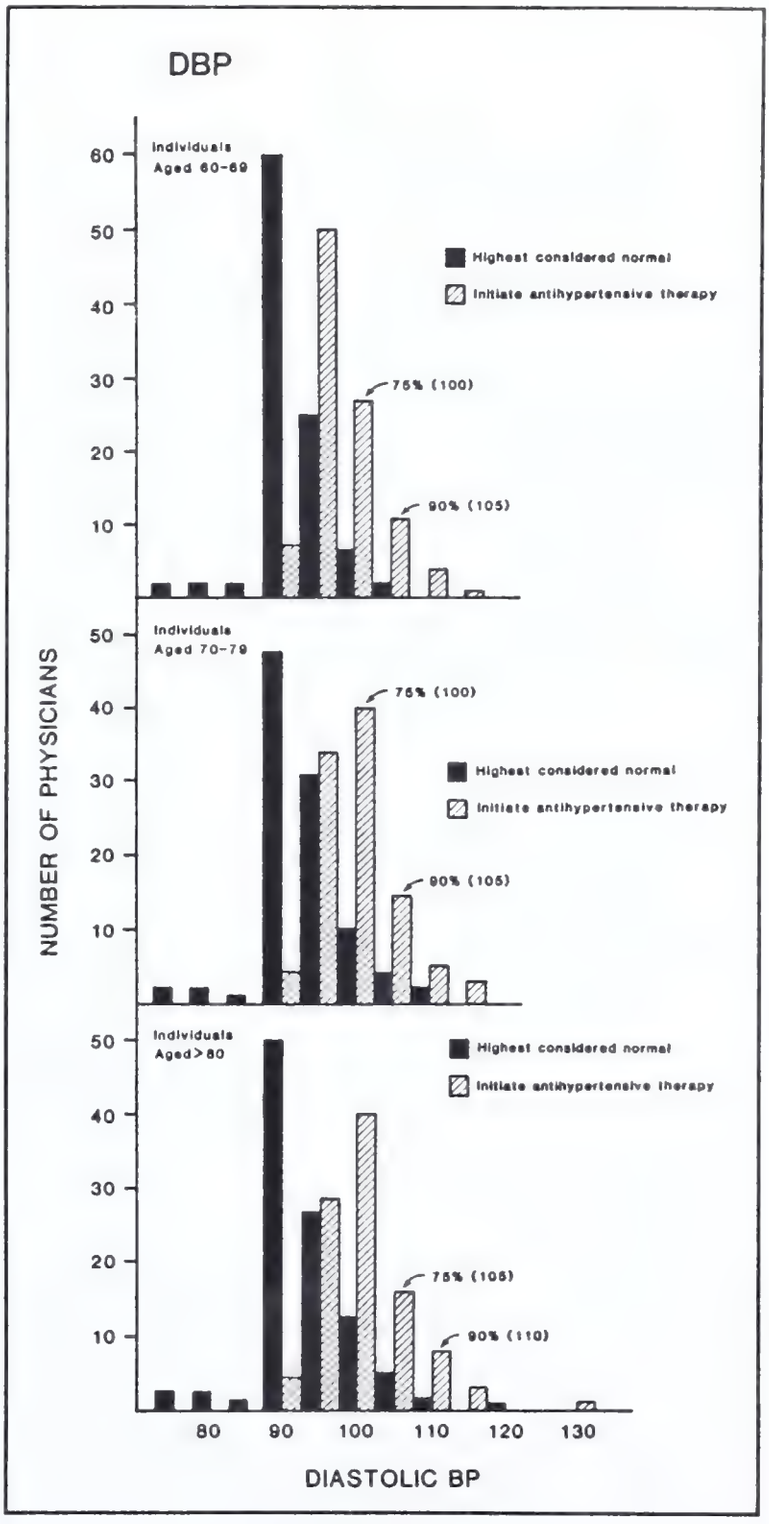


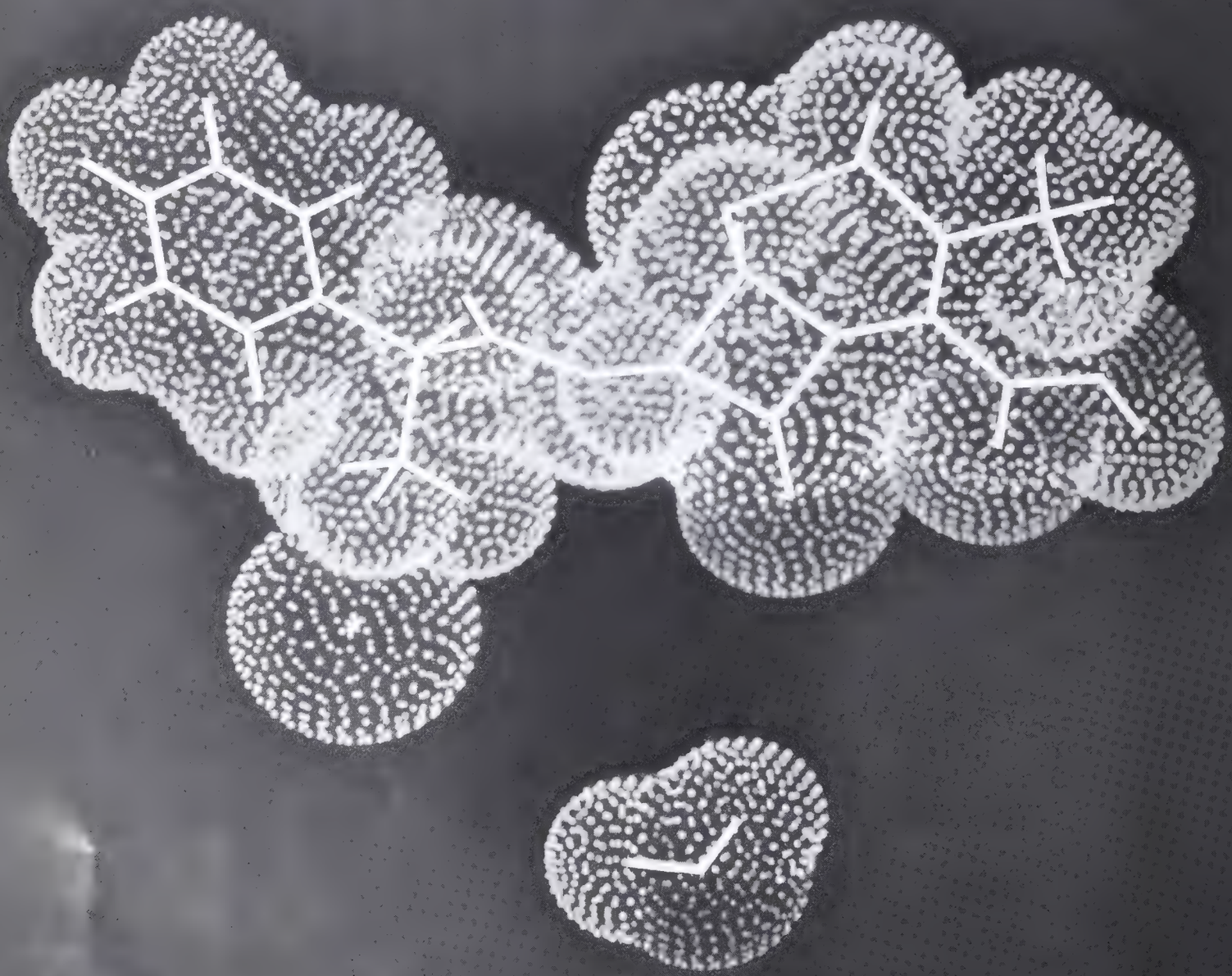
FIGURE 2

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‡Due to susceptible strains of group A β-hemolytic streptococci.

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Summary: Consult the package literature for prescribing information.

Indications and Usage:

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Skin and skin structure infections caused by susceptible strains of *Staphylococcus aureus* and/or β-hemolytic streptococci.

Bone infections caused by susceptible strains of *S aureus* and/or *Proteus mirabilis*.

Genitourinary tract infections, including acute prostatitis, caused by susceptible strains of *Escherichia coli*, *P mirabilis*, and *Klebsiella* sp.

Contraindication: Known allergy to cephalosporins.

Warnings: KEFTAB SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Keftab in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Keftab should be administered cautiously in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy and lactation. Cephalexin is excreted in mother's milk. Exercise caution in prescribing Keftab for these patients.
- Safety and effectiveness in children have not been established.

Adverse Reactions:

- *Gastrointestinal*, including diarrhea and, rarely, nausea and vomiting. Transient hepatitis and cholestatic jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

PV 2060 DPP [091887] 849336

hypertensive individual. They are, however, very useful in patients with coronary artery disease, which is very prevalent in the elderly. There are beta-blockers with a low propensity to cross the blood-brain barrier and these are less likely to cause sedation or depression than some of the centrally acting agents. Some beta-blockers are available in once-a-day dosages. These are some of the reasons for their popularity among physicians prescribing for the elderly patient. Clonidine[29], captopril[30] and methydopa[31] have all been shown to be safe and effective in some studies.

The new slow-release calcium-channel blockers, as well as the beta-blockers with intrinsic sympathomimetic activity, may prove to be excellent medicines to use in the elderly hypertensive patient in the future, but there is limited experience with these drugs in the elderly to date.

General guidelines for the elderly would suggest, however, that all antihypertensive medications be started at low doses; often half the normally recommended starting dose is adequate. Doses should be increased slowly, so as not to cause a rapid drop in blood pressure that may interfere with tissue perfusion. Close observation should be carried out for adverse effects, including careful monitoring of creatinine, electrolytes, calcium, glucose and blood lipids, which may all be affected by antihypertensive medications.

The mental status of elderly patients on antihypertensive medications should also be monitored and they and their families should be interviewed to determine whether the medications may be causing lethargy or depression. Some attention should also be given to the cost of antihypertensive medications, as many elderly patients live on relatively low, fixed incomes and cannot afford to purchase the more expensive agents.

Conclusion

Hawaii ACP members generally favor treating elderly patients with ISH. However, they are evenly divided on the issue of whether to treat mild diastolic hypertension. The medications most favored were thiazide diuretics and beta-blockers. These findings conform to a similar poll carried out in New Jersey, which examined only ISH.

There is no evidence at present that antihypertensive medications are efficacious in ISH. There is some evidence that treatment of very mild diastolic hypertension (dBP 90-94 mmHg) in elderly individuals is beneficial, but this, along with the question of which medications are most efficacious in the elderly, remains controversial.

Therefore, it appears that Hawaii's practice patterns in regard to isolated systolic and mild diastolic hypertension are, as elsewhere in the nation, not entirely based on strong scientific evidence. It is hoped that studies and analysis currently in progress will help to resolve these dilemmas.

REFERENCES

1. Madden TA, Turner IR, Eckenfels EJ: The Health Almanac. New York: Raven Press 1982:1-23.
2. Blood Pressures of Persons Age 60 to 74 Years. U.S., 1971-1974, National Health Survey, National Center for Health Statistics, U.S. Department of Health, Education and Welfare, Series II No. 203, 1977.
3. Kaplan NM: Clinical Hypertension: Third Edition, Williams and Wilkins, Baltimore/London, 1982.
4. Kannel WB, et al: Systolic Blood Pressure, Arterial Rigidity, and Risk of Stroke, *JAMA:* Vol 245, No 12; 1225-29, March 27, 1981.
5. Kannel WB, Dawber TR, McGee DL: Perspectives on Systolic Hypertension. Circulation: Vol 61, No 6, 1179-82, June 1980.
6. Kannel WB, et al: Role of Blood Pressure in the Development of Congestive Heart Failure, *NEJM:* Vol 287, No 16, 781-7, Oct 1972.
7. Shekelle RB, Ostfeld AM and Klawang HL: Hypertension and Risk of Stroke in an Elderly Population. *Stroke:* Vol 5, 71-5, Jan-Feb 1974.
8. Curb JD, et al: Isolated Systolic Hypertension in 14 Communities. *Am J of Epidem:* Vol 14, No 3, 362-70, 1985.
9. Garland C, et al: Isolated Systolic Hypertension and Mortality After Age 60 Years. *Am J of Epidem:* Vol 118, No 3, 365-76, 1983.
10. Colandrea MA, et al: Systolic Hypertension in the Elderly, An Epidemiologic Assessment. *Circulation:* Vol XLI, 239-45, Feb 1970.
11. Breckinridge MB, Kostis JB: Isolated Systolic Hypertension: Survey of Current Clinical Practices. Pending Publication.
12. Hallock P, Benson IC: Studies on the Elastic Properties of Human Isolated Aorta. *J Clin Invest:* 16:595-602, 1937.
13. Wittenberg C: Systolic Hypertension Therapy Trial Begins. *JAMA,* Vol 253, No 12, March 22/29, 1985.
14. Veterans Administration Cooperative Study Group on Antihypertensive Agents; Effects of Treatment on Morbidity in Hypertension; II. Results in Patients with Diastolic Blood Pressure Averaging 90 Through 114 mmHg. *JAMA:* Vol 213, No 7, 1143-52, Aug 1970.
15. Smith W: Treatment of Mild Hypertension Results of a Ten-Year Intervention Trial; U.S. Public Health Service Hospitals Cooperative Study Group. *Circ Research 40; Suppl I,* I98-105, 1977.
16. Helgeland: Treatment of Mild Hypertension: A Five-Year Controlled Drug Trial; The Oslo Study. *Am J of Med:* Vol 69, 725-32, Nov 1980.
17. The Australian Therapeutic Trial in Mild Hypertension; Report by the Management Committee. *The Lancet,* 1261-67, June 14, 1980.
18. M.R.C. Trial of Treatment of Mild Hypertension: Principal Results; Medical Research Council Working Party; *Brit Med J:* Vol 291, 97-104, July 1985.
19. Five-Year Findings of the Hypertension Detection and Follow-up Program. I. Reduction in Mortality of Persons with High Blood Pressure, Including Mild Hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA:* Vol 243, No 23, 2562-71, Dec 7, 1979.
20. Five-Year Findings of the Hypertension Detection and Follow-up Program. II. Mortality by Race, Sex and Age. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA:* Vol 242, No 23, 2572-77, Dec 7, 1979.
21. Amery, et al: Mortality and Morbidity Results from the European Working Parking on High Blood Pressure in the Elderly Trial. *The Lancet,* 1349-54, June 15, 1985.
22. Messerli FH: Individualization of Antihypertensive Therapy: An Approach Based on Hemodynamics and Age. *J Clin Pharmacol:* 21:517, 1981.
23. Gribbin B, Pickering TG, Sleight P, Pesto R: Effect of Age and High Blood Pressure on Baroreflex Sensitivity in Man. *Circ Res:* 29:424-31, 1971.
24. Statement on Hypertension in the Elderly. The Working Group on Hypertension in the Elderly. *JAMA:* Vol. 256, No. 4, 70-74, 1986.
25. Hulley SB, Furberg CD, Gurland B, et al: Systolic Hypertension in the Elderly Program (SHEP): Antihypertensive efficacy of chlorthalidone. *Am J Cardiology:* 56:913-20, 1985.
26. Amery A, Berthaux P, Birkenhager W, et al: Antihypertensive Therapy in Patients Above Age 60: Third Interim Report of the European Working Party on High Blood Pressure in the Elderly (EWPHE). *Acta Cardiol:* 33:113-34, 1978.
27. Vardin S, Mookherjee S, Warner R, Smulyan H: Systolic Hypertension in the Elderly: Hemodynamic Response to Long-Term Thiazide Diuretic Therapy and Its Side Effects. *JAMA:* Vol 250, No 20, 2807-13.
28. Curb JD, Borhani N, Schnaper H, et al: Detection and Treatment of Hypertension in Older Individuals. *Am J of Epidem:* Vol. 121, 371-76, 1985.
29. Thananopavarn C, Golub M, Sambi M: Chonidine in the Elderly Hypertensive; Monotherapy and Therapy With a Diuretic. *Chest:* 83:2, Supplement, 410-11, Feb 1983.
30. Tuck ML, Katz LA, Kirkendall WM, et al: Low-Dose Captopril in Mild to Moderate Geriatric Hypertension. *J Am Geri Soc:* 34:693-96, 1986.
31. Messerli FH, Gerald MD, Dreslinski GR: Antiadrenergic Therapy: Special Aspects in Hypertension in the Elderly. *Hypertension 3 (Suppl II):* 226-235, 1981.

Mammography Dosimetry Survey: Results of An Oahu Study

Scott Dube MD*

The American Cancer Society (ACS) has recommended baseline mammograms for all women between the ages of 35 and 40, repeat examinations every one to two years until age 50, and yearly mammography starting at age 50.[1] When such a large population is exposed to medical X-rays, it is especially important to minimize and monitor the radiological dose associated with the procedure. Major advances in mammography technology over the past decade have led to a dramatic reduction in the radiation dose per exam. This has greatly lowered the risk.

Today, the use of state-of-the-art dedicated mammography systems is required in order to yield high image quality with minimal radiation dose. The National Council on Radiation Protection and measurements (NCRP) Report-85 states that clinically required image quality should be achieved with an average glandular dose of 0.8 rad for screen-film mammography with a grid for a typical two-view exam.[2]

Introduction

Mid-Pacific Medical Physics invited nine Oahu clinics, hospitals and medical centers to participate in a mammography dosimetry survey. The goal was to determine the average glandular dose per single view of a standard phantom. The results were compiled and shared anonymously with each facility enrolled in the survey. It is anticipated that these data will be valuable when evaluating the institution's specific mammographic technique. This information will also help the radiologists and technologists answer questions from the patient and medical community regarding the quantitative aspects of mammography dosimetry.

Materials and Methods

The typical breast was assumed to be a mixture of 50% adipose and 50% glandular tissue by weight, with a compressed thickness of 4.5cm. It has been demonstrated that 0.8cm of

TABLE I
Participating Facilities

Castle Medical Center
Kaiser Honolulu Clinic
Kaiser Foundation Hospital
Kapiolani Medical Center for Women & Children
Kuakini Medical Center
The Queen's Medical Center
Straub Clinic & Hospital Inc. (2 units)
Wahiawa General Hospital

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* Certified Therapeutic Radiological Physicist, Mid-Pacific Medical Physics

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acrylic is equivalent to 1cm of breast tissue.[3] Therefore, an acrylic phantom 3.6cm thick was employed to simulate the X-ray attenuation and scatter properties of the typical breast.

The dosimetry system was a Victoreen Model 660 Digital Survey Meter with a Victoreen Model 660-3 Ionization Chamber. The instrument was last calibrated in June 1986.

At each facility, the mammography technologist was asked what technique would be used to obtain an image in a 50-year-old woman with a typically fatty breast of 4.5cm compressed thickness. Since each unit was phototimed, the independent variables were the kVp and phototimer density settings. The breast phantom was then positioned under the compression plate in the clinical geometry. The ionization chamber was positioned in the field adjacent to the phantom. A film was exposed during the phototimed technique and developed. Also, the exposure measured adjacent to the phantom was recorded. The unit was then switched from phototimed to manual mode. The exposure measured in the identical geometry for a known mAs technique was then recorded.

The phantom was then removed and the ionization chamber positioned in its place. The compression plate was raised to its maximum height. The Reference Entrance Skin Exposure (ESE) was measured, using the manual technique and recording the exposure for a known mAs as the position previously occupied by the breast phantom.

TABLE II
Mammography Units

CGR Senographe 500 t
Philips Diagnost U-M
Siemens Mammomat
Siemens Mammomat-B

The Half-Value Layer (HVL) was determined, using Type 1100 aluminum sheets of 0.1mm thickness. The compression plate was removed from the beam and the filter sheets positioned at the exist window of the collimator assembly. Measurements were taken with 0.1, 0.3, and 0.4mm aluminum in the beam.

Finally, the optical density of the phototimed film was measured using a RMI Densitometer with a calibrated reference film. The optical density (OD) as measured under the center of the breast phantom was correlated to average glandular dose.

Calculations

It was first necessary to determine the Phantom mAs associated with the phototimed breast phantom exposure. This was calculated from the first two measurements as: Phantom mAs = (Phototimed Exposure/Manual Exposure)*(Manual mAs).

Then, the Reference Output associated with the free-in-air measurement was calculated as: Reference Output = (Reference ESE)/(Reference mAs).

Finally, the Interpolated Entrance Skin Exposure (ESE) was calculated as: Interpolated ESE = (Phantom mAs)*(Reference Output).

The Interpolated ESE is meant to represent the free-in-air entrance exposure experience by the breast phantom. The accuracy of the ESE determination is assumed to be ± 20%. This allows for ion chamber accuracy, generator reproducibility and phototimer reproducibility.

TABLE III
Screen/Film Systems

Kodak Min-R/Agfa MR3
Kodak Min-R/Fuji MINH
Kodak Min-R/Kodak OM-1
Kodak Min-R Fast/Kodak T-Mat M

Results

The participating facilities are presented in Table I in alphabetical order. Note that one facility had two units. Tables II and III present the Mammography Units and Screen/Film Systems encountered during the survey, respectively. Table IV demonstrates the range of Specific Techniques employed by the 10 units to image the breast phantom in ascending order of kVp.

Finally, Table V is the summary of the Average Glandular Dose Per Film and associated Film Density, presented in ascending order of dose.

Discussion

NCRP Report-85 recommends an average glandular dose of 0.8 rad for a two-view screen-film mammogram using a grid. Assuming similar geometry between the two views, this corresponds to an average glandular dose of 0.4 rad per film. The average glandular dose of the 10 units surveyed ranged from 0.024 to 0.127 rad per film, with a mean value of 0.075 rad. This indicates compliance of institutions in general with the state-of-the-art recommendations and applications of the mammographic technology.

Six of the 10 units delivered a dose within ± 20% of the mean. The difference among these units is not considered substantial, considering the inherent uncertainties of the experimental design. Two units were found to operate at a dose of approximately two-thirds less than the mean. In each case, the result was anticipated. One unit uses a double screen/double emulsion system that is much faster than the conventional single screen/single emulsion systems used elsewhere. The other unit does not employ a grid, which increases the X-ray beam transmission to the film.

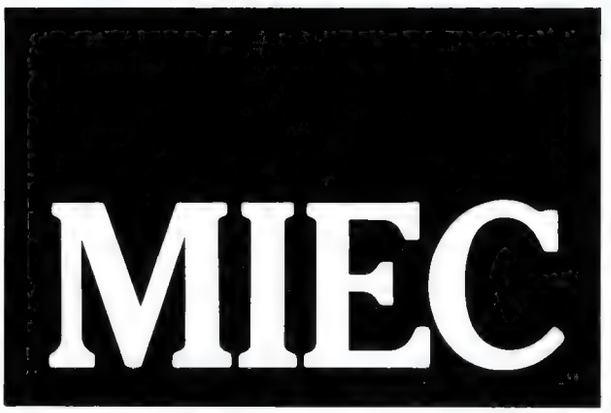
There were two units found to operate at a dose of approximately two-thirds greater than the mean. In these cases, the result is less straightforward to explain. As seen in Table V, the

(Continued on page 25)

TABLE IV
Specific Techniques

kVp	HVL	Density	Grid	SID
25	0.31	-1	Yes	24"
26	0.29	-3	No	18"
28	0.28	+1	Yes	25"
28	0.31	0	Yes	23"
28	0.33	0	Yes	23"
28	0.33	0	Yes	24"
28	0.36	0	Yes	24"
32	0.35	0	Yes	25"
32	0.35	+2	Yes	25"
32	0.36	+2	Yes	25"

Yours, Very Truly

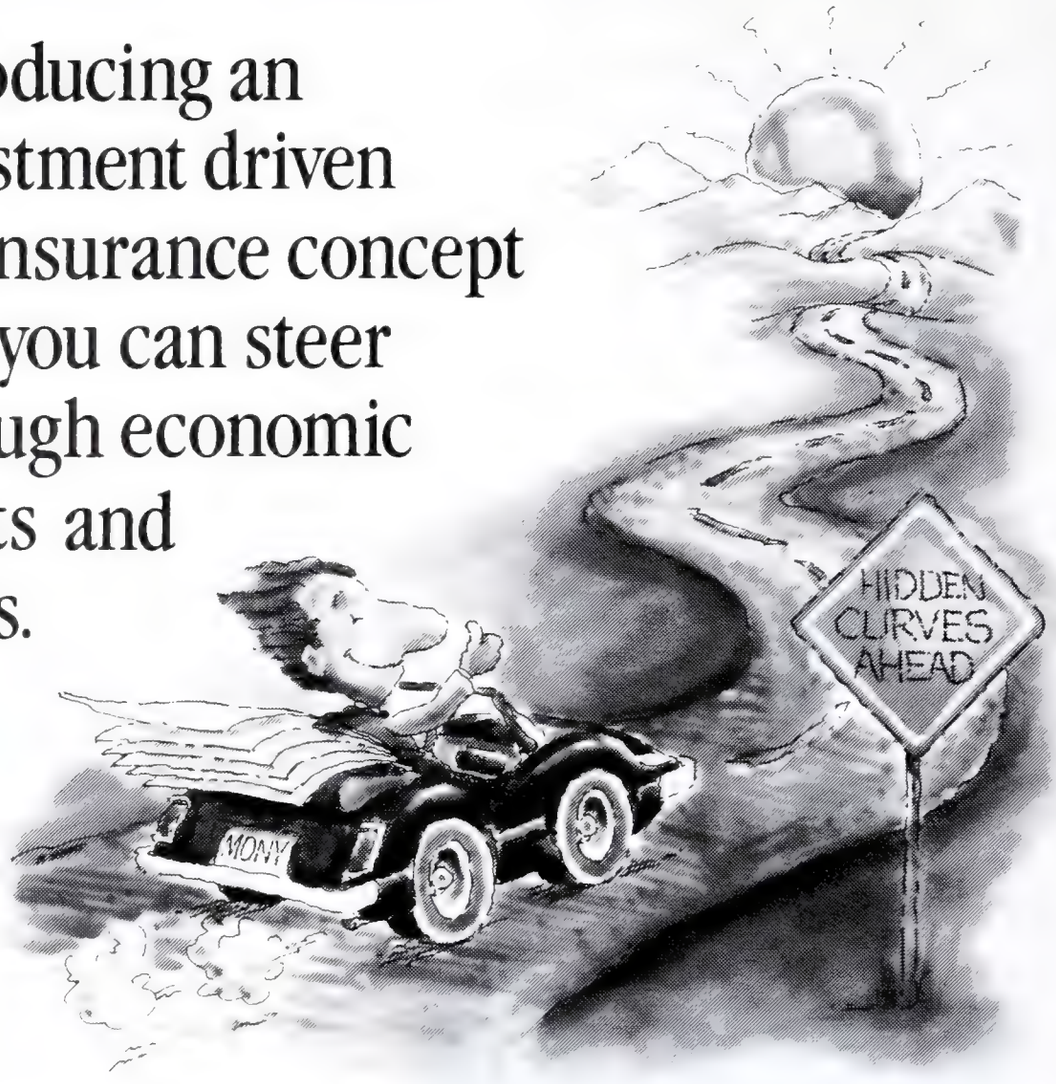


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associated film density is correspondingly greater than the average. But that is true for units operating at a lower dose as well. The ultimate reason may be due to technique, film processor chemistry, image quality or preferred optical density. It must be pointed out that while these two units do exceed the survey mean by more than two-thirds, their average glandular dose is still significantly less than the NCRP recommended value of 0.4 rad per film.

An important limitation of this survey is that no correlation has been made between average glandular dose and image quality. For example, a low dose exam is not necessarily in the best interest of the patient if the low contrast resolution has been compromised. In light of the fact that a five fold difference in dose was observed among the 10 units in this survey, a follow-up study of image quality evaluation would seem in order. Such an effort is being initiated by the American College of Radiology as part of its new Mammography Accreditation Program. The impetus for the project came as a result of the concerns of radiologists, other national medical organizations and the public that qualified personnel perform and interpret mammograms, and that dedicated mammographic equipment be used to ensure that women receive optimum mammographic examinations with the lowest possible risk.[4]

TABLE V
Average Grandular Dose Per Film and Film Density

rad	OD
0.024	1.04
0.032	0.96
0.062	0.80
0.064	1.00
0.075	1.27
0.077	0.95
0.080	1.24
0.086	1.08
0.122	1.20
0.127	1.22
Mean 0.075	1.08

Conclusion

The average glandular dose determined from measurements ranged from 0.024 to 0.127 rad per film among the 10 units surveyed in Honolulu, with a mean value of 0.075 rad. This mean value corresponds to an average glandular dose of 0.150 rad delivered to a typical fatty breast of 4.5cm compressed thickness during a two-view film-screen-grid exam. This is significantly less than the NCRP Report-85 recommended value of 0.8 rad per exam. Further evaluation of dose as related to image quality is to be available through participation in the American College of Radiology Mammography Accreditation Program.

REFERENCES

1. "Mammography Guildelines," *American Cancer Society,* 1983, Calif, 33:255.
2. "Mammography — A User's Guide," *National Council on Radiation Protection and Measurements,* Report 85, March 1986.
3. Branes GT, personal communications, Mar 21, 1986.
4. "Mammography Accreditation Program Aims at Quality Assurance of Facility," *ACR Bulletin,* February 1987.

AIDS Tests: When and for Whom?

Medical testing of any kind can be invaluable or injurious. AIDS testing is no exception. In this article, Dr. Michael J. Barry, who has studied how test information can be used to make medical decisions, discusses the ways both individuals and society can get the most out of AIDS testing. Barry is a member of the General Internal Medicine Unit at the Massachusetts General Hospital and an instructor in medicine at Harvard Medical School.

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How Accurate Is AIDS Testing?

The best available methods detect antibodies to the AIDS virus, not the virus itself. Technically, they establish only whether someone has beeen exposed; they don't directly demonstrate infection. The weight of opinion, however, is that antibodies are a valid sign of infection. Direct tests for the virus, such as viral culture, are too cumbersome and not sufficiently sensitive for clinical use.

The most commonly used screening test is the *enzyme immunoassay* or EIA (also known as the ELISA). In a tested population, the EIA can detect 99% of the infected people, with one important exception: It might have a lower yield with people who have been recently exposed, since several months must elapse before antibodies appear. And this test produces only about two false-positives for every 1,000 of those people who are *not* infected. (For an EIA result to be called positive, it must be confirmed by repeating the test on the same sample.)

The following hypothetical examples will give a sense of how such a test works. In a city of 100,000 people, none of whom are infected, screening the entire population with the EIA would produce 200 positive results, all of which would be false. If in another city of the same size there are 100 infected people, EIA testing of everyone would still produce about 200 false-positives, but it would also detect 99 true positives and miss only one case of infection. Thus, in this population, where the infection rate is relatively low, two-thirds (200/299) of the positive results would be erroneous.

But suppose there were yet a third city

of 100,000, in which 10,000 people are infected. Here the test would detect 9,900 cases of true infection (missing 100), while reporting 180 false-positives; the percentage of postive test results that are false now drops below 2%.

What this example points out is that medical tests of *all* types, including AIDS tests, perform best when the condition being looked for is relatively common, and much less well when it is rare.

A positive EIA is customarily confirmed with the so-called *Western blot,* which is also a test for antibody but which is less subject to the false-positive errors of the EIA. Many experts believe that a positive result by this method is an absolute sign that infection is present. But there is some doubt about this. A technician "reading" a Western blot must look at a pattern of bands on a paper strip and decide whether they represent antibodies to specific AIDS virus proteins.

There are ways to minimize the leeway for a subjecting error, but not to eliminate it. Also, some conditions (such as a background of intravenous drug abuse) may alter blood proteins in a way that confuses both EIA and the Western blot. Currently, Western-blot testing of samples from people who have already had a false-positive EIA might yield a rate of false-positives as high as 5%.

Western blots performed on the 180-200 false-positive EIA samples from our three imaginary cities would be negative on all but nine or 10, at most. Rarely, the Western blot fails to confirm a valid positive EIA. In a recent study of blood donors from the Atlanta area, two out of 98 people with a positive EIA and a negative Western blot had a positive culture for the AIDS virus. Thus, people with a positive EIA and negative Western blot cannot be completely reassured.

Who Is At High Risk And Who Isn't?

The experiences that put one at risk are:

- Having shared a needle with an intravenous drug abuser since 1977.
- For a man, having had sex with another man or men since 1977, except in a strictly and mutually monogamous relationship.
- Having been sexually active in an area where heterosexual transmission is believed to be high — notably Central Africa.
- Having been exposed to blood or certain blood products between 1977 and 1985.
- Having been the sexual partner of a person in one of the previous categories.
- Having been a prostitute. (The status of prostitutes is unclear, since the observed high rate of infection may result from exposure through intravenous drug abuse. Likewise, the status of men who have had intercourse with prostitutes is uncertain.)
- Being born to a woman whose history has put her in one of these other categories.

Obviously, at the very low end of the risk spectrum are people who have been sexually inactive or in monogamous relationship since 1977. What is difficult to assess is the level of risk when people are in an intermediate situation — say those who have been heterosexually active with many partners since 1977 but without suspicion that any one of these partners was practicing high-risk behavior. Similarly, having had other sexually transmitted diseases raises the level of risk to some degree.

In many ways, each person is his own

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best judge of the likelihood that he has been exposed to the AIDS virus, and test results are going to be most valid when people who seek testing do so because they accurately recognize that they could have been exposed.

When Should A Person Have Himself Tested?

Someone who is thinking about having himself or herself individually tested needs to consider several points.

1—People at very low risk of being exposed to the AIDS virus are the ones most likely, if they test positive, to have a false result. Since a negative result dosen't give much information in this group, the value of testing is slight. But if a low-risk person is very worried, testing may, on balance, be worthwhile.

2—For people at higher risk, testing is more informative, but not automatically a good idea. A test is only valuable if it yields information that you can do something with. At present no medical treatment is known to reduce the likelihood that someone infected with the AIDS virus may get sick. The main question would be: "What would I do differently if I had the information?" People who may have been exposed, regardless of their test results should protect others and themselves from potential exposure through sexual or blood-born routes.

Whether knowledge of test results, in and of itself, leads to more effective changes in behavior is not known. Preliminary evidence indicates that behavior change in gay men has not been much influenced by knowledge of test results (as distinct from general educational programs, which have made a considerable difference in sexual practices of gay men).

3—In the case of AIDS testing, there is real risk of stigmatization based on a positive result. There is also a potential for difficulty in obtaining health or life insurance and for discrimination in housing or employment.

Any healthy person considering the AIDS test should identify in advance how the result — negative or positive — is likely to change his or her life. The psychological value of testing has to be calculated as a balance of three factors: (1) relief from the anxiety of being uncertain about one's status, (2) the reassurance potential of a negative test result, and (3) the possibly cataclysmic effect of learning that one tests positive. Virtually every authority on the subject believes that counseling should be available at the time a positive result is reported and in the period immediately afterward.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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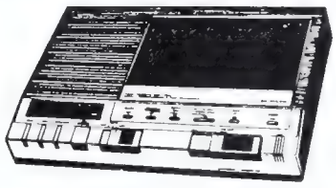
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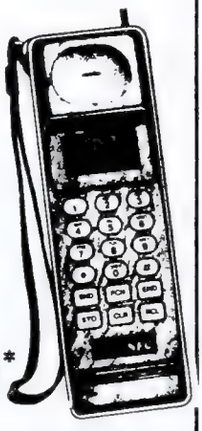


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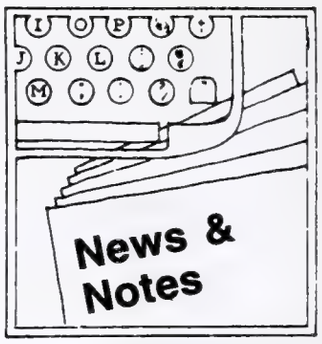
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Life in These Parts

After a Friday morning medical conference at Mabel Smyth, we ran into Arthur Wong who was in a philosophical mood . . . "How's things?" we inquired . . . "Same ole baloney . . . No matter how you slice it, it's the same old baloney. . . ."

Psychiatrist Linus Pauling Jr.'s Round Top Drive residence designed by Vladimir Ossipoff won the 1986 Hawaii Architectural Arts Award sponsored by the State Foundation on Culture and the Arts. . . .

The physicians on the Big Island seem to be divided on the issue of food treated with irradiation . . . First there was a list of physicians against irradiation and now we have a list of physicians for . . . They include the following: Ernest Bade, Edward Ballerini, George Bracher, Reginald Carvalho, Ruben Casile, Ronald Embry, Samuel Gingrich, Ben Hur, Roy Koga, Ung Lee, Paul Matsumoto, Don Matsuura, Ruth Matsuura, James Matayoshi, Lloyd Minaai, Edwin Montell, Ruth Oda, Hoon Park, Rodney Ono, Moon Soo Park, Barry Shitamoto, James Williams, Stephen Woo Jr., and John Wright. . . .

Back in April, Blood Bank president Julia Frohlich happily reported that none of the five patients who tested positive for AIDS after receiving blood products from AIDS-related donors (before the institution of AIDS antibody screening in 1985), have developed symptoms of AIDS. . . .

Richard Littenberg, internist and nuclear med man writes in the Honolulu magazine that aside from AIDS, a second, more insidious disease is reaching epidemic proportions . . . The Epstein-Barr virus causes a malfunction of the immune system and a chronic fatigue syndrome . . . 75% of the patients are women in their 20s to 50s; three-fourths of the patients describe musculoskeletal discomfort, difficulty in concentrating, and short-term memory loss . . . 90% have sleep disorders and one-half have anxiety or panic attacks and problems with balance . . . Patients learn to modify their activities and are benefited by low-dose antidepressants, NSAIDs e.g. Motrin and Clinoril. . . .

In October, William Reed, 36, had his left arm practically torn off from the axilla when his car was sideswiped by an oncoming bus . . . His arm was restored by the QMC surgical team of Don Parsa, QMC chief plastic surgeon; S.K. Liao, trauma surgeon in charge; Gerald Derrick, orthopod; and Mark



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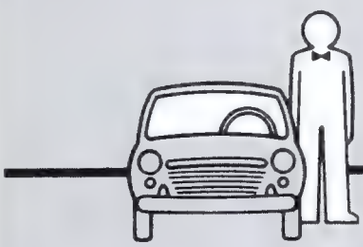
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Mukiishi, surgical resident . . . Don Parsa commented that "this was the most challenging job in my 11 years at Queen's and just about the worst I have attended. . . ."

Neurosurgeon Ray Taniguchi is trying to interest the Hawaii school system in an accident prevention program aimed at high school students. His format is simple . . . First, a short 15-minute film on neurosurgical injuries . . . Then a local celebrity (e.g. Larry Price) talks about neuroanatomy; finally two wheelchair patients relate how their lives have been changed by their accidents. HMSA is the sponsor, and RNs from QMC and the Rehab Center donate their times. . . .

NIDDM 1/20 to 1/40

Diabetic Diets: Bedtime snacks for patients on NPH before dinner: nuts make good snacks for children . . . Tofu doesn't raise glucose levels . . . Diseases a/c Obesity: diabetes, gall stones, CAD, hypertension, hernia, thrombophlebitis, osteoarthritis, pulmonary insufficiency, toxemia, infertility, cancer etc. . . . Cancers a/c Obesity: colon, breast, prostate, gall bladder, ovary, endometrium etc. . . .

Factors Interfering with Diabetes Control (especially elderly): (a) Alteration of senses (vision, smell, taste); (b) difficulty preparing food and eating (tremors, arthritis, poor dentition, altered GI function); (c) altered renal and hepatic function; and (d) diminished exercise and mobility. . . .

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RE: Milk:
Whole milk = 4% fat; Low fat milk = 2% fat; Drinking skim milk is preferrable — half the calories; just as much protein . . .

RE: Alcohol: If overweight, don't drink . . .
Ethyl alcohol is very calorie-dense . . . Calories/oz = proof; e.g. 86 proof is 80 calories/oz . . . Alcohol does not raise blood sugar . . . Being a liver toxin, it turns off glyconeogenesis and actually causes hypoglycemia . . . Diabetics when drinking need carbohydrates (i.e. popcorn, pretzels, *not* peanuts)

RE: Fruit Juice:
No fruit juice for diabetics . . . Eat fruit instead . . . Juice is absorbed rapidly and raises blood sugar. . . .
Diabetics can drink if: (a) In control of DM, (b) not alcoholic, (c) not pregnant, and (d) not overweight

RE: Activity:
Exercise should be aerobic . . . Older patients can walk. . . .

RE: GlycoHb:
Useful if lab results are reliable . . . Immunosuppression in Type I: cyclosporin, prednisone. Type II: Start with oral Rx and

if still 200 mg plus with maximum dose, add insulin to oral Rx. . . .

Conference Humor

Richard Merriman, visiting professor from Texas lectured on prostaglandins in November . . . Regarding the state of Texas economy: "They have a new name for Texas oilmen . . . They are called waiters. . . ."

"The Texas police rounded up three prostitutes . . . They were all virgins. . . ."

Nancy Bohanan, visiting professor from U of Colorado lectured on diabetes in October . . . Regarding the pitfalls of diabetes control: "A 54-year-old patient was found to be diabetic and started on insulin . . . The patient's blood sugar continued to be elevated so the nurse who had taught him how to inject insulin was sent to investigate . . . "Are you taking your insulin like I told you?" "Oh sure . . . I inject the orange every morning and eat it right away. . . ."

The story of Diabetes Mellitus as told in an hour lecture by fascinating lecturer Nancy Bohanan of Colorado:

Historically, DM was described in Egypt 3,000 years ago as the "melting down of flesh into urine." In 1921, insulin was first isolated . . . DM is a syndrome characterized by inappropriate hyperglycemia and associated clinically with microvascular and/or macrovascular complications . . . Third leading cause of death . . . No. 1 cause of blindness, impotence, amputation, renal failure . . . The incidence of MI in DM is twofold and CVA threefold. . . .

Type I or IDDM (Also juvenile onset, ketosis prone, brittle diabetes) . . . Incidence 5% to 10%; dependent on exogenous insulin; onset in youth, but may occur at any age . . . Islet cell antibodies frequently present; a/c with certain HLA types; not as hereditary as commonly thought. . . .

Type II or NIDDM . . . Obesity is a major factor (60% to 90% are obese when diagnosed) . . . Insulin levels may be low, high or normal . . . More hereditary . . . Not ketosis prone under basal conditions . . . Onset after age 40, but may occur at any age . . . May require insulin . . . Includes families with autosomal dominant inheritance. . . .

Physicians Speak Up

Fred Reppun, our erudite HMJ editor-in-chief commented on the Supreme Court nomination pros (David Broder's column 10/6), and cons (Sandy Grady's column 10/7), and The Advertiser editorial "Beyond Bork's Rejection . . ." Broder criticized the public and media and called it an unfair trial while Grady maintained that it was the voice of the people that prevailed . . . Fred writes that "David Broder wants us to go back 200 years, so that Judge Bork could have had a chance to be approved by his elitist peers without public input while Sandy Grady likes the way the people of this country have the power to decide that Judge Bork should not be approved . . . The big difference over 200 years is that in the 18th century, the people could not hear nor be heard from within a reasonable timeframe . . . Nowadays, thanks to instant com-



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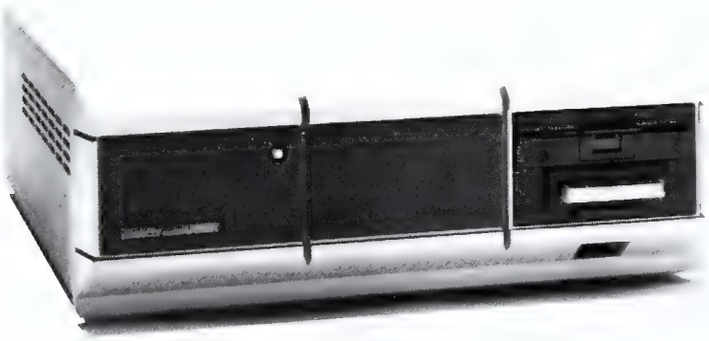
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munication media, the people can participate as we should."

Elected, Honored & Appointed

Ruth Oda, Hilo pediatrician for 30 years, was nominated "1987 Woman of the Big Island" and described by an enthusiastic Hawaii Tribune Herald writer as "Dean of Hilo pediatricians" . . . Ruth commented: "The older we get, the more we realize that none of us exists alone . . . We are really all brothers, one family . . . The staff and I are family and so are our patients . . . We need each other . . . We take care of each other, right? . . . Everyday I am being thankful" (with a glance heavenward).

The Hawaii Society of Pathologists elected John Wellington president, David Horio president-elect, and Stanley Loo secretary-treasurer. . . .

Arnulfo Diaz, Kauai Medical Group internist received board certification in Quality Assurance and Utilization Review. . . .

Jack Scaff Jr. and Buck Buchwach were unanimously commended by the Honolulu City Council for "outstanding, voluntary community service." The two conceived of Honolulu's Great Aloha Run/Walk charity event, which today is the ninth-largest in the nation and has 20,000 participants. . . .

Life in Other Parts

Karl Gallegos and his colleagues in Georgia have examined the records of 1,000 physicians referred to their impaired physician program between 1975 and 1986. They found that of those referred: 92% were chemically dependent; 5.9% had psychiatric problems. Alcohol was the most abused drug (66.4% of dependent physicians); followed by Demerol (26.4%); Valium (16.5%) and amphetamines (11.3%). Seventy percent of the physicians reported abusing more than one drug. Cocaine abuse was reported by 8.3%; a dramatic increase over the past five years . . . IV drug administration was reported in 38.9% of addicted physicians. . . .

The American Cancer Society recommends: first mammography at age 35; after age 40, mammography every two or three years and after age 50, more frequently.

Miscellany

The blind man with his seeing-eye dog ventured into a department store . . . He grabbed his dog by its tail and started swinging him round and round over his head . . . The floor manager came arunning . . . "What are you doing?" he gasped . . . "Just looking around. . . ." (As told by Patsy Matsuura, Big Island PHN)

☆ ☆ ☆

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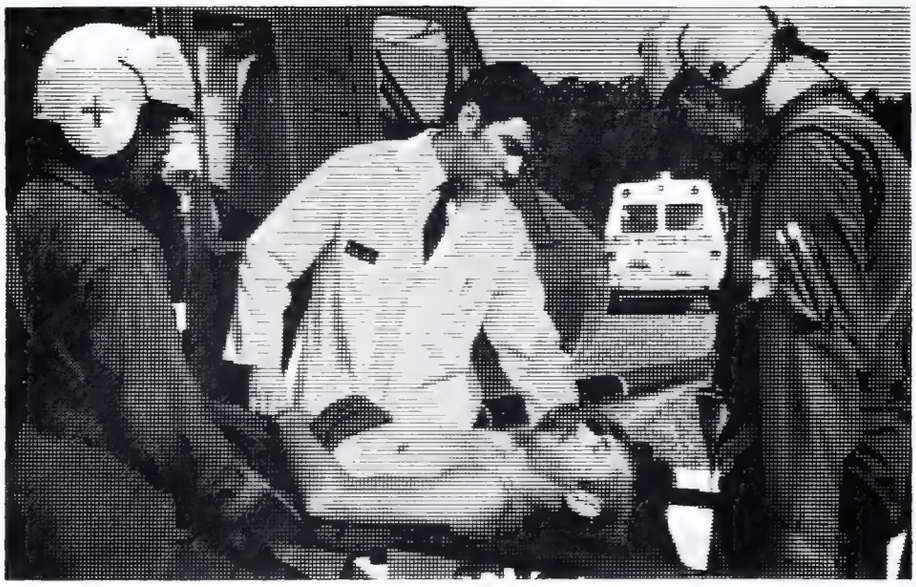
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it out for a few more years. . . . (As told by our tennis-playing friend, Clay Benham)

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The American Academy of Pediatrics, Hawaii Chapter, held a successful Health Fair for children and youths on Sept. 26 and 27 at the Ala Moana Center exhibition area. . . .

New Physicians

Anesthesiologist Valerie Riqual (married to ENT man Nestor Riqual) and emergency medicine man Thomas Kaufman joined the Kauai Medical Group in May. . . .

Reflux Esophagitis

Role or non-role of hiatal hernia in reflux esophagitis: an anatomical finding without clinical findings . . .

Determinants of reflux esophagitis: a. Competency of antireflux mechanisms b. Potency and volume of refluxed material c. Esophageal emptying d. Tissue resistance

Evaluation of Reflux Symptoms: a. UGI b. Esophageal manometry c. Esophageal PH studies d. Esophageal emptying e. Acid provocative test f. Endoscopy g. Esophageal biopsy g. Esophageal P.D. (potential difference)

Complications of Reflux: a. Strictures (most important) b. Hemorrhage (rare) c. Perforation (uncommon) d. Aspiration e. Columnar lined lower esophagus

Non-Drug Therapy of Reflux Esophagitis: a. Elevation of head with 6 to 8 inch blocks b. Diet Modifications: smaller meals; less proximity to bedtime; less fat; less food substances, e.g. spices, carbonated drinks, coffee, tomatoes, peppermint c. Weight reduction d.Modification/cessation of drug intake, e.g. alcohol, smoking, aspirin, NSAID's, anti-inflammatory agents, calcium channel blockers

Drug Therapy: Future: a. Sucralfate (cyto protective, increases local prostaglandins, increases micro blood flow) b. Prostaglandins c. Dorneperidine d. Dyrogastrone

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Pathophysiology of Gastroesophageal Reflux: Lower Esophageal Sphineter incompetence 1. 2 degrees of LES strength or LES pressure (extrinsic muscle tone, neural or hormonal mechanism) or 2. Extrinsic abnormalities, e.g. diaphragmatic hiatus; mural rosette; acute esophageal angle

MRI CASE OF THE MONTH

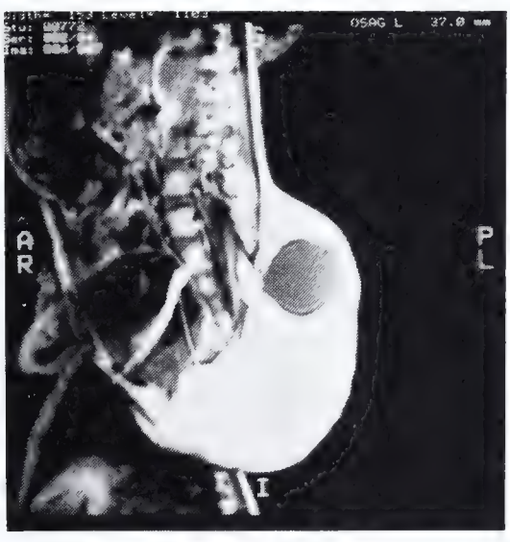
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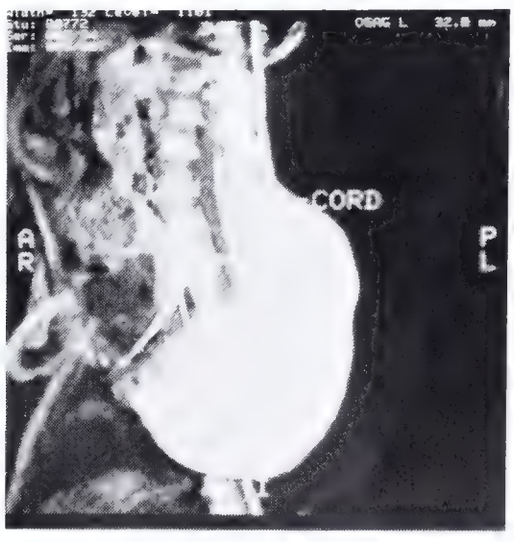
Scan Area: MRI of Lumbar Spine

Clinical History: Three year old female with meningomyelocele









These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: The films above, in the axial and sagittal planes, demonstrate a meningomyelocele with tethered cord. There are both subcutaneous and intraspinal lipomas. A small cystic collection is evident within the tethered cord.

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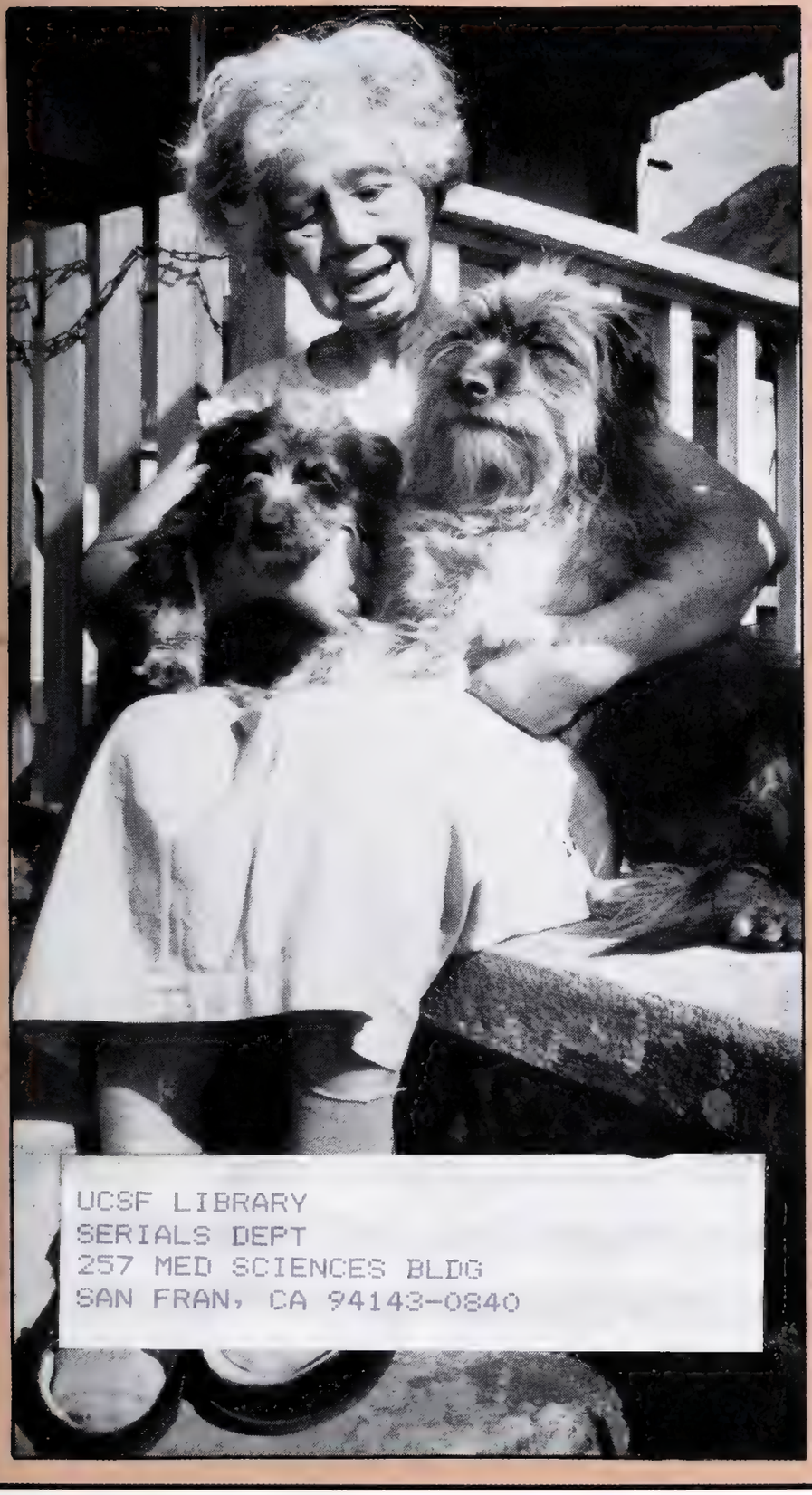
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KALAUPAPA AS PART OF THE NATIONAL PARK SYSTEM 82
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Alice Kamaka, age 82, was sent to Kalaupapa as a young girl in 1919. Told she would not live long, Alice is now the person who has lived at the Settlement longer than any other and has witnessed almost 70 years of change. In her lifetime she has experienced the tragedy of isolation, the advent of a cure for leprosy, the end of isolation and the evolution of Kalaupapa into a National Historical Park where her memories, along with those of others, will serve to educate and inspire future generations.

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
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Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
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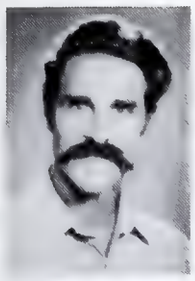
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FROM THE DIRECTOR OF HEALTH

JOHN C. LEWIN, MD

Hansen's Disease in Hawaii

I am very pleased that the Hawaii Medical Association has decided to devote this issue to Hansen's Disease in Hawaii.

Although physicians rarely encounter new cases of Hansen's Disease in medical practice, we will nonetheless occasionally see this disease due to the large numbers of refugees and immigrants in our State. An article has been included in this edition of Hawaii Medical Journal by Richard Frankel MD, Director of the Department of Health's Tuberculosis and Hansen's Disease Programs.

Most of the attention on Hansen's Disease in Hawaii seems to be related to historic Kalaupapa. As the Mayor of Kalawao County, which is part of the responsibilities of the job of being the Director of Health, I have been warmly welcomed by the 99 remaining residents of this famous peninsula. We are presently upgrading and streamlining both outpatient and inpatient health care activities at Kalaupapa as part of Governor Waihee's commitment to "new beginnings" across our State.

However, Kalaupapa is *not* where most of the Hansen's Disease patients in Hawaii presently reside. Hansen's Disease patients are treated very satisfactorily as outpatients across the State. The Hale Mohalu facility at Leahi Hospital is still an important inpatient facility for those who need these services. The old Hale Mohalu facility, which was located in Pearl City, is now abandoned but the old chaulmoogra tree, once thought to be a effective therapy for leprosy, is still there. Many of the Kalaupapa patients hope that some day a senior citizens' community center can be housed on the site, both for Hansen's Disease patients and for other senior citizens from the Pearl City area. This facility may be developed in the near future.

All of us need to be aware that Hansen's Disease patients often receive less than an ideal approach and attitude by society. Many patients left Kalaupapa voluntarily in 1969 to become "regular" citizens and continue their therapy as outpatients in all of the counties of Hawaii. These people still receive their Hansen's Disease care from the Department of Health. However, most of these people are medically indigent, and the rest of their medical care is not covered, unless they become "impoverished" and are eligible for Medicaid. Those who have any kind of personal property or assets, or who are willing to work, are "punished" by being denied medical and other social benefits that make it possible for them to live independent lives. This unfortunate situation needs to be rectified. And, the public needs to be educated continually regarding Hansen's Disease so that people will not persist in discriminatory, prejudicial, and inhumane attitudes toward people so afflicted.

Let us physicians then all work together to recognize, diagnose, and appropriately treat the new cases of Hansen's Disease which will appear in our midst for some years to come. Let us also strive to provide more compassionate and comprehensive medical and social support services to those with Hansen's Disease who have made the effort to live as independent citizens in our community.

I join with the Governor in promising those people who have chosen to stay at Kalaupapa, that this facility will remain open to them as long as they choose to stay there.

Finally, we have a great deal to learn from those afflicted with Hansen's Disease. These people can teach us much about the appropriate and inappropriate ways that society may choose to deal with the present AIDS epidemic. Furthermore, these people are a great source and wealth of the aloha spirit. They continue to teach us a great deal about how to live with grace and dignity in the face of adversity and affliction. We are indeed fortunate to share Hawaii with these sensitive and caring individuals.

The Hansen's Disease Issue

This issue of the JOURNAL is a landmark in that we have brought together the history of a disease that is closely associated with post-Captain Cook Hawaii: Leprosy, or Hansen's Disease. This issue also explores the changes in medical and societal approaches to its diagnosis, treatment and public health attitudes over the course of 150 years, and the resolving of a confrontation that has reference to what we now face, worldwide, in AIDS.

It appears propitious that Vol. 21, 1987, of the *Hawaii Journal of History* recently published by the Hawaiian Historical Society, includes as its lead article the true story of Kaluaiko'olau, or Ko'olau the Leper.

The "original and true story" by Pi'ilani, his wife, was published in 1906 in Hawaiian. Frances N. Frazier's English translation appears "almost in its entirety for the first time" in the *Hawaii Journal of History*. It is a dramatic and highly emotional story of love, loyalty, firm belief in God, and of civil disobedience in 1893 on Kauai. All of Hawaii's physicians should read it.

Leprosy, as it was called the world over in 1893, "was known to the Hawaiians as ma'i Pake, the Chinese sickness. It was also called ma'i ali'i, the royal sickness," writes Frazier, "because a chief was reported as being the first person in Hawaii so afflicted. It was also called ma'i ho'aka'awale, the separating sickness," for obvious reasons. "Kalawao was known as ka luakupapa'u kanu ola, the grave of living corpses," reports Frazier.

This issue of the JOURNAL is the brainchild of Don Char and Dave Scollard, both associates with the UHSM. Dave Scollard is the "issue editor." His dedication and hard work in assembling the nine articles by local authors is to be deeply appreciated by the JOURNAL, by the Hawaii Medical Association and by our community.

J.I. Frederick Reppun, MD
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In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: *Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.*

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J-6138 January 1986

Hui Hoa Aloha — The Hansen's Disease Association

Donald F.B. Char MD*

This organization, as with so many other human efforts dealing with social changes, was born amid strife and turmoil and grew out of adversity.

In the late 1970s and early 1980s, Hawaii was embroiled in much controversy surrounding the event of the closure of Hale Mohalu in Pearl City, and the transfer of its patients to Leahi Hospital.

Several young public health students who were joined in this protest movement, recognized that there was a great need to gather together a group of people dedicated to being advocates expressing the concerns and needs of Hansen's Disease (HD) patients in our state. It had to be a privately sponsored organization, divorced from public governmental funding, and able to recruit membership and support from the entire spectrum of our community. By spring of 1984, following the destruction by bulldozers of Hale Mohalu in Pearl City in September 1983, this band of young people got together with a number of HD patients and a few physicians who were actively involved in providing patient care, to begin to discuss the need for establishing such an organization.

In October 1984, following many meetings and discussions, this entity became officially incorporated. The initial band of pioneers in this effort, who subsequently were elected to serve on the Interim Board of Directors, included Donald A. Sroat MD, president; Elroy Malo, vice-president; Anwei Skinsnes Law MPH, secretary-treasurer; Paul Harada; Kevin Kunz MD MPH; William Kaakimaka; Benjamin Young MD; and Jeffrey Bergbauer.

The name Hui Hoa Aloha means "a society of friends" in Hawaiian. As stated in its charter, "The general purposes of this Association shall be to provide support for persons with HD and to aid in public education concerning this disease."

It may be of some interest to note that the founders rejected the notion of naming this association after a disease or illness. The word Leprosy, or even Hansen's Disease, still carries a heavy burden of guilt, shame and fear for many. The name we have chosen thus demonstrates the constant need for all of us to not look merely at the labels of diseases or diagnoses alone, but to care for and befriend the persons who are afflicted. In this way, the name Hui Hoa Aloha could well serve as an example for all others who deal with the sick and disabled.

The membership dues were deliberately set very low in order to encourage everyone, regardless of financial status, to join in these efforts. Over 200 members send in their annual dues and contributions; they are scattered over 11 states and five countries.

The organization has been involved in many community activities of support and for education. It has printed brochures describing HD, and the Hui itself. A service program that has drawn much community interest is that of delivering freshly prepared fast foods, obtained in Honolulu, to the patients living in Kalaupapa on a monthly basis. This program has brought a new source of enjoyment to many, especially to those who are unable to travel to Honolulu. Physicians are annually reminded of the presence of this disease in our state through presentations at their annual scientific meetings. Open public meetings have been held in which HD patients have presented their stories to the community. Their health and situation problems have been presented in forums at churches and at other gatherings.

In looking ahead, there is much to do. This state continues to see new patients, the bulk of them immigrants, and uses modern methods of treatment and management.

There is a need to sustain and maintain a good quality of life for those patients still living in Kalaupapa, especially as the population there declines.

More than this however, Hui Hoa Aloha must work to ensure that this treasured heritage of Father Damien in Hawaii must never be lost to the world, thus acting as a stimulus to remind everyone of the great suffering that society can inflict upon others under the guise of "treating" a dreadful disease.

This special issue of the JOURNAL devoted to HD has been put together by David Scollard, a member of the Board of Directors of Hui Hoa Aloha. It is a monumental piece of work that should serve as an important reference for all those scientists and others who are interested in HD. Coming from Hawaii, with its long history of coping with an endemic disease, and in particular its more recent enlightened attitude towards those unfortunately afflicted, this issue may have a helpful impact of understanding not only on our nation but on the world.

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- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

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Hansen's Disease in Hawaii — Current Status

Richard I. Frankel MD*

Hansen's Disease (HD), formerly known as leprosy, was first recognized in Hawaii in the 1830s. Although the disease may have been introduced by Chinese immigrants who worked as laborers on sugar plantations, it could also have been introduced by Europeans, since the disease had continued (and continues) to occur in Europe, although not in the epidemic form noted in the Middle Ages. As the disease spread in Hawaii, the native Hawaiian population experienced the highest infection rate.

The Board of Health was initially established in 1850. In 1865, the first law isolating patients with leprosy was passed. In conjunction with this "Act to Prevent the Spread of Leprosy," two facilities were established. The Kalihi Hospital and Detention Station, for initial evaluation and for treatment of mild cases and of suspected cases, was opened that year at a place near present Sand Island Road; no trace of the facility remains. The second facility was the initial settlement on Molokai, located at Kalawao, on the eastern side of the small flat peninsula which juts out from the pali along the northern coast (Kalaupapa lies on the western side of the peninsula). The first patients were sent to Kalawao in 1866. These individuals all had very advanced disease.

The history of Hansen's disease in Hawaii during the third quarter of the 19th century was marked by progressive increases in the incidence of the disease (to a peak of more than 1% of the population), increasing discrimination, and isolation of victims of the disease. Developments in Europe on the other hand, which had experienced its own epidemic several hundred years earlier, were the forerunners of dramatic changes which eventually altered the history of leprosy in Hawaii. First, the width of the spectrum of leprosy was recognized, i.e., physicians came to understand that tuberculoid leprosy and lepromatous leprosy were part of the same disease.[1] Then Hansen, in 1873, detected the bacillus which is today known as *Mycobacterium leprae*.[2]

This dramatic discovery, antedating Koch's discovery of the tubercle bacillus[3] and for the first time representing the association of microorganisms with the diseases of humans, not only was the first step leading to active treatment of the disease but also paved the way for social change. The disease was no longer considered to be hereditary. The arguments of those who claimed that victims of leprosy were being punished by God or were afflicted for some other 'just' reason were weakened, though not yet abolished. A means was at hand (facilitated by the introduction of fuchsin staining, the basis for acid-fast staining, by Neisser in 1879[4]) to allow estimating the degree of contagiousness, the activity of the disease, and eventually the efficacy of therapy.

At the end of the 19th century, the settlement on Molokai was moved from East to West, from Kalawao to Kalaupapa. The early years of the 20th century saw the establishment of the short-lived United States Leprosy Investigation Station at Kalawao. This facility closed to patients just four years after its establishment.

The first half of the 20th century saw attention being directed toward improving the living conditions at Kalaupapa, ranging from improved housing and nutrition to removing barriers separating the patients at the settlement from the public. Concurrently Hale Mohalu in Pearl City was designated as the leprosy treatment facility on Oahu in 1949, when the Kalihi Hospital was finally closed. Hale Mohalu represented a new approach to care: Rehabilitation of victims of an infection, rather than custodial care of the hopelessly ill. In conjunction with this approach, responsibility for control and care of leprosy was transferred from the Board of Hospitals and Settlement to the Department of Health.

Certainly a critical development in the change in management of HD was the introduction of antimicrobial chemotherapy in the 1930s. Sulfonamides were introduced for the treatment of certain bacterial infections in 1935[5] and penicillin followed in

(Continued on page 51)

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MRI CASE OF THE MONTH

TETHERED CORD WITH LIPOMA

Clinical Information: A 7-year-old child with soft tissue mass overlying the dorsal aspect of the lower lumbar spine and sacrum.

Image #1

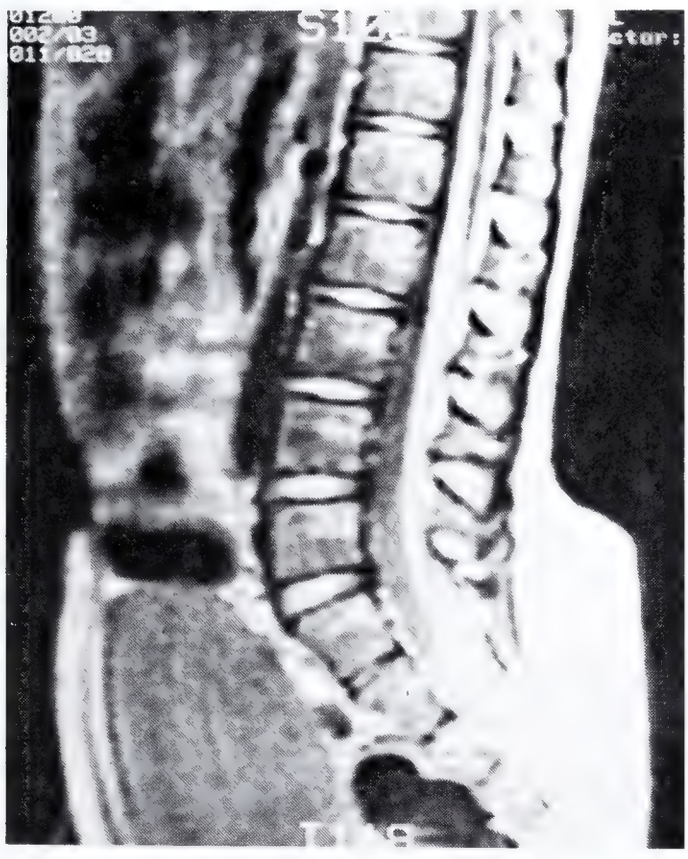
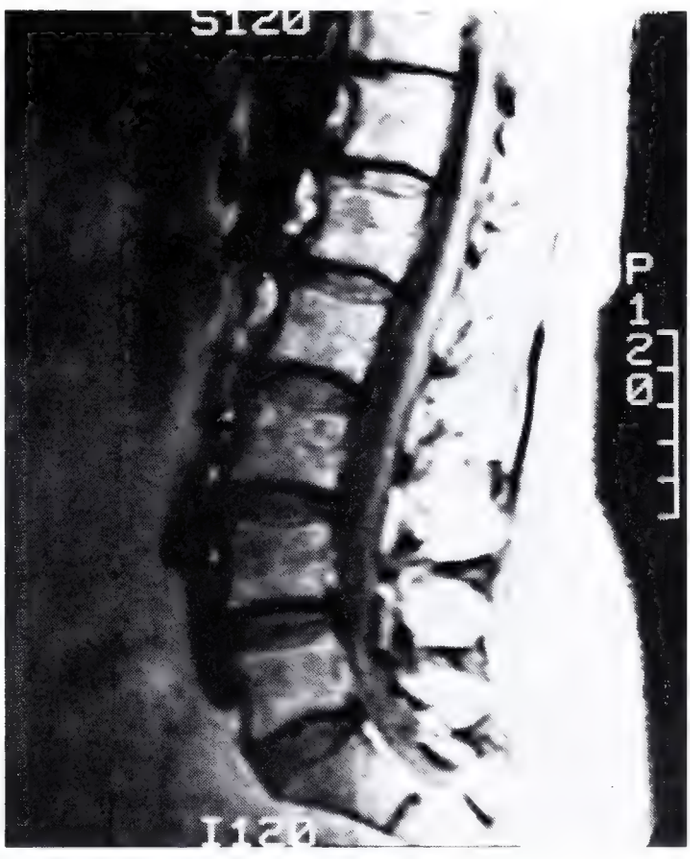


Image # 2



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: Image #1 shows a tethered cord extending down to the lower border of L5 with an associated small lipoma extending through a spina bifida defect into a larger subcutaneous lipoma. Image #2 is a normal patient for comparison, with the conus at T12 and the cauda equina extending caudally.

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1941.[6] Dapsone, related to the sulfonamides and like them, initially synthesized in Germany, was first formulated in 1908[7] but the drug was not used therapeutically for leprosy until 1941, at what was then known as the National Leprosarium, and is currently called the Gillis W. Long Hansen's Disease Center of the United States Public Health Service.[8] The initial formulation was for intravenous administration. Intramuscular dapsone was introduced in 1946 and oral use began in 1947.[9] Dapsone therapy was introduced in Hawaii in 1946.

Although dapsone was and is effective and its availability dramatically changed the management of, concepts about and attitudes toward HD, changes of equal magnitude followed the introduction of other effective drugs, as well as the concept of using multiple drugs simultaneously. The groundwork for this concept was established as the result of the experience with treatment of tuberculosis, where monotherapy with streptomycin was followed by initial dramatic improvement but a high incidence of subsequent relapse.[10] The use of multiple drug regimens for tuberculosis became standard during the 1950s.[11] Isoniazid (INH), the keystone of all treatment regimens for tuberculosis, was introduced in 1952.[12] It took longer for leprologists to obtain additional effective agents and to recognize the problem of drug resistance and the need for multidrug regimens.[13]

Clofazimine was synthesized in 1954,[14] first used clinically in the treatment of leprosy in 1962,[15] and widely available in 1969.[16] Rifampin was synthesized in the late 1960s[17] and initially reported as being efficacious in the treatment of HD in 1970.[18,19] These three agents are the components of the multidrug regimens which are standard today.[20]

Combination therapy, particularly when rifampin is used, rapidly renders patients non-contagious.[21] Since the early 1970s, inpatient therapy has been reserved for those who are too ill to be safely managed as outpatients, rather than as a means of isolating patients.

Although in the interest of brevity we greatly understate the importance of the contribution, we must mention Shepard's initial discovery of the growth of *Mycobacterium leprae* in the mouse footpad.[22] This model permitted quantitative studies of the effects of antimicrobial agents against the leprosy bacillus.

Hale Mohalu became the main treatment facility and outpatient therapy was conducted there, with supervision by the Hale Mohalu physician. The outpatient program was established as a section under the chief of the Communicable Disease Division of the Department of Health; however, the Hale Mohalu physician provided direct patient care. In 1978, the Hale Mohalu facility at Pearl City was closed and the inpatient program was transferred to Leahi Hospital. Outpatient care continued to be provided by the Hale Mohalu physician at the new site.

The next major change resulted from the decision of the United States government, following the lead of Hawaii's program, to support outpatient therapy within the community. This was established as a Contract Health Services Program at the National Hansen's Disease Center (NHDC) at Carville, Louisiana. That Program provided significant funding for an outpatient program in Hawaii, beginning in August 1983. Under the terms of the contract, Hawaii established a program under which all newly diagnosed cases of HD were assigned to private physicians for outpatient care. The program was designated the Hansen's Disease Prevention Program and was directly attached to the Communicable Disease Division of the DOH.

The functions of the Prevention Program included data collection, classification of patients, establishment of treatment protocols, monitoring therapy, providing patient education, dispensing antimicrobials (provided by the NHDC) for treatment of HD and paying for HD-related services provided.

The Hale Mohalu physician continued to provide consultative services regarding medical management of the outpatients in the Program. The first physician was hired by the Program in August 1984. Shortly thereafter, the program title was changed to its present name, the Hansen's Disease Community Program (HDCP).

Funding for the Program since 1986 has been primarily the result of a bill introduced by Senator Daniel Inouye and signed into law in late 1985 as Public Law 99-117. This law amended the Public Health Service Act, which had funded inpatient care of HD, to provide funding for both inpatient and outpatient care. The NHDC modified their contract to reflect this change.

The HDCP is currently funded annually by State funds ($227,000) and federal funds ($453,000) and has a staff of 14. The HDCP function has also changed somewhat, in that medical consultation is now provided by the Program Director. The Director also monitors patient progress and compliance with treatment protocols, oversees all services provided to patients and is responsible for disbursement of funds to provide for these services. There are two full-time nurses in the Program.

In addition, the Program funds three positions in the Public Health Nursing Branch of the Department of Health. These PHNs devote their time to the care of HD patients and their families, and are assigned to the three Public Health Nursing Offices on Oahu which serve the regions of the island that have the largest number of Hansen's disease cases. The remainder of the patients on Oahu and all of the patients on the other islands are eligible for care by the general duty Public Health Nurses. This care includes patient education; periodic screening for skin lesions, neurologic deficits, and any complications of HD; assessment of and assistance with compliance with medications; and assisting patients in complying with visits to physicians and other health care providers.

The HDCP staff provides direct patient services by means of periodic clinics for contact screening on Oahu and for contact screening and patient consultation on Hawaii, Kauai and Maui. Paramedical assistants who speak at least one major Filipino dialect, and also Samoan, provide important contacts with and assistance to immigrants who have or develop HD, and to the family members of those individuals. Clerical staff provide compilation of statistics, purchasing of supplies, disbursement of funds, and assistance in tracking patients. The program is developing computer capability. Staff members provide the 'front-line' communication with patients and others who visit and call the Program office. The Program is housed in the Sinclair Building of Leahi Hospital at 3650 Maunalei Avenue in Kaimuki. The telephone number is 735-2472.

New patients are referred to the Program office for initial evaluation and the beginning of an extended program of education and reevaluation. The Program physician and nurses examine the patient, review the diagnostic information and officially classify the patient for the State Registry. Initial education includes the giving of information about the clinical features of HD and what the patient can expect in terms of treatment, complications, and contagiousness. In addition, the services of the HDCP are outlined.

Clinical management is provided by the referring physician. If there is no referring physician or if that physician does not feel comfortable managing HD, the patient is given a choice of other physicians who would be willing to serve. However, program personnel provide continuing education, monitoring, support

and evaluation. They also assist the private physicians in attempting to ensure that patients see physicians regularly and take the prescribed medication. These medications are sent to the physicians' offices for dispensing to the patient there. Patients are periodically referred for evaluation of neurologic dysfunction and ocular involvement, as well as for special shoes, podiatric care, and other specialty care as needed. The cost of care for HD and its direct complications is provided by third party payers and by the HDCP. Outpatients are responsible for payments for care of illness which is not directly related to HD. All care for those on the Hale Mohalu and Kalaupapa registries is paid for by third party payers or by the State of Hawaii Program.

A Hansen's Disease Medical Advisory Committee (HDMAC), composed of a number of private physicians active in the care of HD and other physicians with expertise in dealing with this illness, advises the Chief of the Communicable Disease Division and the Director of the HDCP. This Committee provides guidance, helps set goals and direction, and addresses specific problems dealing with the provision of care to patients in the Program. The Committee in 1979 established treatment protocols which set Minimum Therapy Protocols (Table I). The Program monitors patient therapy, with the goal of ensuring that all patients are treated according to the guidelines of these protocols, or according to a comparable regimen when the protocol must be changed for reasons of drug resistance or patient intolerance.

There are presently 639 patients on the State HD Registry. Of these, 538 are on the outpatient registry, 4 on the Hale Mohalu registry, and 97 on the Kalaupapa Registry. Not all of those on the Hale Mohalu and Kalaupapa registries live in those facilities.

Over the past ten years, Hawaii has had between 30 and 50 new cases of HD each year. In absolute numbers, this puts us second to California, although Hawaii's case rate is the highest in the nation, as is the prevalence of HD. Almost two-thirds of the new patients are immigrants from the Philippines. About 15% have come from American or Western Samoa. Eight percent of those diagnosed in the last ten years have been born in Hawaii and 12% are from other countries, primarily countries in Asia and the Pacific. Cases are fairly evenly distributed by age, except for a smaller number in the group younger than 10 years-of-age. The largest number are in the group from 20 to 29 years-of-age. Of those on the outpatient registry (almost 90% of the State Registry) 422 patients, or approximately three-fourths, reside on Oahu, 57 reside on Hawaii, 31 on Maui, 22 on Kauai, 5 on Molokai, and 1 on Lanai.

Although Hansen's disease is a chronic illness which has been known since ancient times, caused by one of the most slowly-growing microorganisms known, dramatic changes have taken place in the last 40 years. These include changes in knowledge, drug treatment, prevention of complications, and particularly changes in attitudes towards the disease and those who develop the illness. These changes have led to dramatic changes in patient care. The control programs of the Department of Health of the State of Hawaii have changed in an attempt to keep up with these developments and to look to the future. Patients with HD can look forward to a normal life-span, free of chronic disease, if the disease is diagnosed early and he or she is compliant with the therapeutic regimen. Although the vast majority of patients are now treated out in the community, and community acceptance has improved dramatically, continuing education of the public remains a challenge for the State DOH and for all those concerned with human rights, to insure that patients with HD have the opportunity to lead lives free of discrimination and characterized by the rights and respect which we recognize as the proper expectation of all residents of the State of Hawaii.

REFERENCES

1. Danielssen DC, Boeck W. Om Spedalskhed. Christiana, Norway. 1847.
2. Hansen GA. Spedalskhedens Arsager. Norsk Mag Laegevidensk 4:76-79, 1874.
3. Koch R. Die Aetiologie der Tuberculose. Berl klin Wochenschr 19:221-230, 1882.
4. Neisser A. Ueber die Aetiologie des Aussatzes. Breslauer Aerztl Ztschr 1:200, 1879.
5. Domagk G. Ein Beitrag zur Chemotherapie der bakteriellen Infektionen. Dtsch Med Wochenschr 61:250-253, 1935.
6. Abraham EP, Chain E, Fletcher CM, Florey HW, Gardner AD, Heatley NG, Jennings MA. Further observations on penicillin. Lancet 2:177-188, 1941.
7. Fromm E, Whittmann J. Derivate des p-nitrophiophenols. Berl Dtsch Chem Ges 41:2264-2273, 1908.
8. Faget GH, Pogge RC, Johansen FA, Dinin JF, Prejean VM, Eccles CG. The promin treatment of leprosy. A progress report. Public Health Rep 58:1729-1741, 1943.
9. Lowe J, Smith M. The chemotherapy of leprosy in Nigeria with an appendix on glandular fever and exfoliative dermatitis precipitated by sulfones. Internat J Lepr 17:181-195, 1949.
10. D'Esopo ND. Clinical trials in pulmonary tuberculosis. Am Rev Repsir Dis 125, Number 3 (part 2 of 2 parts): 85-93, 1982.
11. Fox W. The John Barnwell Lecture. Changing concepts in the chemotherapy of pulmonary tuberculosis. Am Rev Respir Dis 97:767-790, 1968.
12. British Medical Research Council. The treatment of pulmonary tuberculosis with isoniazid. An interim report to the Medical Research Council by their Tuberculosis Chemotherapy Trials Committee. Br Med J 2: 735-746, 1952.
13. Centers for Disease Control. Increase in prevalence of leprosy caused by dapsone-resistant *Mycobacterium leprae*. Morbid Mortal Weekly Rep 30:637-638, 1982.
14. Barry VC, Belton JG, Conalty ML, Denneny JM, Edward DW, O'Sullivan JF, Twomey D, Winder F. A new series of phenazines (rimino-compounds) with high antituberculosis activity. Nature (London) 179:1013-1015, 1957.
15. Browne SG, Hogerzeil LM. "B 663" in the treatment of leprosy. Lepr Rev 33:6-10, 1962.
16. Vischer WA. The experimental properties of G 30 320 (B 663): A new antileprotic agent. Lepr Rev 40:107-110, 1969.
17. Sensi P, Maggi N, Furesz S, Maffii G. Chemical modifications and biological properties of rifamycins. Antimicrob Ag Chemother — 1966, p. 699-714, 1967.
18. Leiker DL, Kamp H. First results of treatment of leprosy with Rifadin. Lepr Rev 41:25-30, 1970.
19. Rees RJW, Pearson JMH, Waters MFR. Experimental and clinical studies on rifampicin in treatment of leprosy. Br Med J 1:89-92, 1970.
20. Report of a WHO Study Group: Chemotherapy of leprosy for control programmes. Tech Rep Ser 675, World Health Organization, Geneva, 1982.
21. Shepard CC, Levy L, Fasal P. Further experience with the rapid bactericidal effect of rifampin on *Mycobacterium leprae*. Am J Trop Med Hyg 23:1120-1124, 1974.
22. The experimental disease that follows the injection of human leprosy bacilli into foot-pads of mice. J Exp Med 112:445-454, 1960.

Current Hansen's Disease Community Program
Minimum Therapy Protocols

Type of Disease	Therapy	Duration
Indeterminate (I) and Tuberculoid (TT)	Dapsone 100 mg daily [(i)]	3 years beyond negativity
	Rifampin 600 mg daily [(iii)]	6 months
Borderline-Tuberculoid (BT)	Dapsone 100 mg daily	5 years beyond negativity
	Rifampin 600 mg daily	6 months
Mid-borderline (BB)	Dapsone 100 mg daily	10 years beyond
	Rifampin 600 mg daily	3 years
	Clofazimine 50 mg OD [(iv)] (may be added)	3 years
Borderline-Lepromatous (BL)	Dapsone 100 mg daily	Indefinitely
	Rifampin 600 mg daily	3 years
Lepromatous (LL)	Clofazimine 50 mg OD (may be added)	3 years

(i) Clofazimine — 50-100 mg daily should be substituted for Dapsone throughout the protocols whenever Dapsone resistance is suspected.

(ii) Negativity — Negative smears (BI=O, MI=O) for 1 year
No clinical activity for 1 year

(iii) Rifampin — Dosage may be calculated at 10 mg/kg daily

(iv) Clofazimine — Should be added when Dapsone resistance is probable.

A Review of Immunopathologic Studies of Human Leprosy Lesions *In Situ*

David M. Scollard MD PhD*

The clinical and histologic spectrum of leprosy presents physicians and investigators with a uniquely broad and complete range of host responses to one infectious pathogen. Other infectious diseases have similar polar extremes of either a strong host response or none, but in leprosy the greatest number of patients fill in the complete spectrum of responses between these poles.

How M. leprae *can elicit such a range of responses has challenged pathologists since Virchow, using the advanced technology of his day (the development of dyes for the textile industry), described some of the histologic features of the skin lesions[1]. Recent advances in biotechnology now enable us to study the tissue lesions of this disease with powerful new tools, in the endeavor to answer that fundamental question.*

The Immunopathologic Spectrum of Leprosy

The spectral concept of leprosy was developed over more than a century of modern scientific observation[2], and was first fully formulated as an *immunopathologic* spectrum by Skinsnes in 1964[3]. An immunologic basis for the spectrum was deduced primarily from histopathologic and clinical evidence. These clinical and histopathologic features of the various types of leprosy were subsequently divided by Ridley and Jopling into a widely accepted five-part classification system[4].

In highly resistant, polar tuberculoid (TT) patients, with few bacilli in their tissues, epithelioid macrophages are found within a well-organized strong granulomatous response, reflecting strong cell-mediated immunity (CMI) and delayed hypersensitivity (DTH) to *M. leprae*. In non-immune, polar lepromatous (LL) patients, large numbers of bacilli proliferate within aggregatres of distended, foamy macrophages, among which small numbers of lymphocytes are apparently scattered at random. The majority of patients in most series are in the borderline group of patients, borderline tuberculoid (BT) or borderline lepromatous (BL), with similarities to the respective polar type, or in the center of the spectrum (BB).

These histologic features in skin biopsies provide the only objective laboratory measurements which correlate well with the broad clinical spectrum of resistance in leprosy, in all of its subtypes. This clinico-pathologic classification of the disease is therefore the basis for current understanding of the immunology of leprosy in man, and has become the yardstick by which all immunologic tests and theories in leprosy are measured.

Acute Reactions in Leprosy

The typical lesions described above are generally indolent, developing slowly and causing little physical discomfort to patients for months or years, until and unless nerve involvement becomes symptomatic. Approximately 50% of patients, however, experience one or more episodes of acute, generalized inflammatory activity with fever, malaise, neuropathy, arthritis, etc., termed "reactions" [reviewed in[5]]. Two major categories of reaction are recognized clinically, "reversal reactions" and *erythema nodosum leprosum* (ENL) designated Types I and II, respectively, by Jopling[6].

Reversal (Type I) reactions occur in all borderline types of leprosy (BL, BB, BT), and are characterized by increased inflammation of pre-existing skin (and nerve) lesions. Histologically, these are edematous and lymphocytic infiltration is thought to be increased, but there is no typical, diagnostic feature. These reactions have long been ascribed to spontaneous increases in CMI/DTH to *M. leprae*[7], though little evidence to support this has been available until recently (discussed below).

ENL (Type II) reactions occur in LL and BL patients, in whom large numbers of bacilli are present in skin and peripheral nerve lesions. This reaction presents with the sudden development of crops of very tender, erythematous cutaneous nodules which do not follow the distribution of pre-existing leprosy lesions, together with fever, neuritis, etc. Histologically these are acutely inflammed, with edema and many polymorphs. ENL is widely regarded as an antigen-antibody complex phenomenon[8], though evidence supporting this is not strong[9].

The Immunologic Basis of Leprosy

During the last two decades, strenuous attempts have been made to correlate these different types of leprosy with assays of cellular immune function *in vitro*. These data have been the subject of several detailed reviews[10,11,12]. The fundamental result

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of this work has been the repeated observation that the proliferative response of lymphocytes from lepromatous patients to *M. leprae in vitro* is greatly diminished or absent, and that such responsiveness increases, in general, as one moves toward the tuberculoid portion of the spectrum[13]. This immunologic non-responsiveness is specific for *M. leprae,* clinically and *in vitro.*

Current efforts to explain this phenomenon *in vitro* are concentrated on immunoregulatory mechanisms in leprosy: the possible role of T-suppressor cells[12], the role of interleukin-2 (IL-2) and its receptors (IL-2R)[14-17], and the macrophage-activating consequences of interferon-gamma (gINF)[18-20]. A concise synthesis of information from studies *in vitro* suggests the following outline.

Phagocytosis of *M. leprae* and phagosome-lysosome fusion[21] proceed normally, but the "respiratory burst" which usually accompanies phagocytosis may not occur after the ingestion of leprosy bacilli[22]. Antigen presentation to T cells apparently occurs normally in leprosy[22], but the possibility of aberrant antigen processing has not yet been examined.

Some unique glycolipid antigens of *M. leprae* are apparently able to stimulate selectively T-suppressor cells from the peripheral blood[24], which may delay or prevent the initiation of cellular interactions required to generate effective immunity. The same antigens may also stimulate proliferation of T-cells, however[25]. The production of IL-2 by circulating lymphocytes may be abnormal in lepromatous patients, although different researchers have reported widely different results[14-17]. IL-2 is an absolute requirement for the proliferation of lymphocytes in response to antigen[26], and aberrant regulation of this function would be expected to have numerous adverse consequences.

T-lymphocytes from lepromatous patients produce subnormal amounts of gINF when cultured with *M. leprae,* but not with other antigens[18]. As a result, macrophages are not activated, and this is correctable with antigen plus IL-2 or with recombinant gINF *in vitro*[18-19] (and *in vivo,* see below).

Macrophages are agreed to be the effector cells which ultimately destroy *M. leprae* although the mechanisms by which they do so are unclear. Hydrolytic enzymes have long been proposed as the effector mechanism, based on histochemical studies[27]. Toxic oxygen metabolites (O_2 and H_2O_2) are currently being studied, by analogy to their documented roles in destroying other intracellular parasites[28,29].

Inflammatory, macrophage-mediated events are thus perceived to be responsible for destruction of *M. leprae.* These are initiated and at least partially regulated by T-cells and their products, providing the specificity for the response and, presumably, for the aberrant response in lepromatous disease. The possibility of defective macrophage function in the early processing of bacilli has not been excluded.

While these immunologic phenomena are being resolved in fine detail, even at the molecular level, two fundamental difficulties remain. First, no studies have been able to determine whether the observed abnormalities represent underlying causative defects, or are simply consequences of prolonged, chronic infection. The long incubation time, insidious onset, low attack rate and lack of methods for detection of subclinical infection are among the many obstacles which have made the design of such a study of leprosy in man impossible. No suitable animal model exists to probe this fundamental question, though several animal infections with *M. leprae* are useful for other purposes[30]. The chronic infection and high antigen load in lepromatous patients must have a profound effect on regulatory mechanisms of immunity and inflammation, however, and so the basic question is whether or not genetic influences are of major importance. Elegant studies in mice indicate that this may be so[31], and associations have been observed between particular HLA-D haplotypes and different types of leprosy in man [reviewed in[32]]. After intensive studies of multiple-case families, however, no single, unifying "genetic defect" has yet been identified.

A second important shortcoming of the immunologic studies noted above is that peripheral blood has been the source of lymphocytes for nearly all of them. Recent work has clearly demonstrated that the percentages of the various T-cell subsets in the blood differ markedly from those in the skin lesions in leprosy[33-35]. The composition of the infiltrate in the lesions represents both recruitment to the lesion of selected cells, and the proliferation and death of other subsets of cells. It is therefore likely that the composition of the infiltrate in the tissue is a more important reflection of the processes at work in the host's immune response to his infection than is obtained by examining cells from the peripheral blood.

Studies of Leprosy Skin Lesions *in situ*

Rapid technological advances in the last decade have provided several new means of assessing immunopathologic aspects of the skin lesions themselves, including immunohistochemical identification of cell types with monoclonal antibodies, evaluation of the local effects of recombinant lymphokines, cloning the cells obtained directly from the lesions and the use of suction-induced blisters as a means of repeated sampling of a skin lesion.

Several groups of investigators have applied immunohistologic staining techniques to the examination of skin biopsies in leprosy, as summarized in Table 1. Some discrepencies exist due to differences in staining techniques and methods of counting cells in tissue sections, but there are several important points of agreement. First, T-helper cells predominate in the granulomatous infiltrates of tuberculoid leprosy, while T-suppressor cells predominate in lepromatous lesions. This is due to both a relative and absolute decrease in T-helper cells in lepromatous lesions[36], since the absolute number (and percentage) of T-helper cells increases from the lepromatous to the tuberculoid forms of leprosy, while the absolute number of T-suppressor cells does not differ substantially across the leprosy spectrum.

Particular microanatomic distributions of cell subsets have also been observed, such as the arrangement of T-suppressor cells around the macrophages in tuberculoid lesions, as contrasted with the random admixture of suppressor cells and foamy macrophages in lepromatous lesions[41]. Langerhans cells, the macrophage-related, specialized antigen-presenting cells of the skin, have been found by some to be more numerous in tuberculoid lesions than in lepromatous ones[36], and we have noted a spatial relationship between Langerhans cells and cells with interleukin-2-receptor (IL-2R+)[40], suggesting an interaction between them.

Additional information has been obtained by identifying activation markers on the infiltrating cells. Both IL-2 producing cells and IL-2R-bearing cells are more numerous in tuberculoid lesions than in lepromatous ones[36,42], as are cells bearing another activation marker, Tal[43]. We have also noted a major increase in the number of IL-2R+ cells in the epidermis of patients at the onset of reversal reactions[40]. Since the synthesis of IL-2 and expression of IL-2R on T-cells are molecular indicators of immunologic activation, this is valuable, functionally relevant information derived from the study of the skin lesions *in situ.*

Cell function cannot be inferred from cell phenotypes, however, and different methods must be applied to explore directly the functions and the mechanisms regulating them. One solution

to this has been to clone lymphocytes from the fresh biopsy specimen[44]. This can produce large numbers of cells with identical functional capability, such as antigen-specific helper or suppressor cells, which are valuable tools in examining immunologic mechanisms *in vitro*. Little additional information is gained, however, about the immunoregulatory mechanisms operating within the lesion itself.

A third approach being used to examine events within the lesion itself is the local injection of purified, recombinant lymphokines, using immunohistochemical studies of biopsies to evaluate their effect on the composition and pattern of the infiltrate. Injection of gINF into lepromatous skin lesions, for example, has been observed to result in macrophage activation, relocation of Langerhans cells within the epidermis, keratinocyte expression of Ia molecules, and the influx of T-helper cells[19,20]. These findings suggest that lack of gINF production may be a part of the immunologic defect in lepromatous disease, and that therapeutic measures which stimulate gINF might be beneficial. The implications of these and related findings using recombinant lymphokines are very important in advancing our understanding of thise disease, and in developing new means of treatment. Studies requiring biopsies (in addition to the diagnostic one) as a means of evaluation, however, are not practical or acceptable in many leprosy control programs.

An ideal method for the study of the infiltrates in leprosy would combine the advantages of the biopsy — direct sampling of the lesion — with the ability to examine viable cells at frequent intervals, as can be done with cells from the blood. One technique which offers such a combination is the application of continuous, gentle suction to the skin, resulting in separation of the epidermis from the dermis at their anatomic junction[45]. We have adapted this painless, non-scarring tech-

Immunologic Abnormalities in Leprosy Demonstrated in Biopsy Studies

Feature Assessed	Tuberculoid	Lepromatous	References
Helper/Suppressor Ratio	4.0	0.05	34
	1.67	0.26	36
Helper/Suppressor distribution	T-helper cells in cuff around epithelioid cells of granuloma	Supressor cells mixed randomly with foamy macrophages	37
		H:S Ratio increased in ENL	37, 38
Absolute numbers of T cells	T-H =1400/ mm^2	T-H=200/ mm^2	36
Langerhans cells in epidermis	28.2	15.3	36
IL-2 Producer cells (percent of all T cells)	0.032/ mm^2	0.0019/ mm^2	36
		Increased in ENL	39
IL-2 Receptor-bearing cells (percent of all T cells)	11.7/ mm^2	1.9/ mm^2	36
		Increased in Reversal Reactions	40
Response to gamma interferon	Not studied	Increases in both T-h and T-s cells	19
Macrophage content of hydrolytic enzymes:			
Beta-glucuronidase	Normal	Decreased	27
N-acetyl-glucoseaminidase	Normal	Decreased	27

nique to induce multiple small, nearly identical blisters directly over skin tests or lesions[46]. Cells within the blister fluid are collected on a small filter, segments of which are immunostained to identify different cell types, while the fluid can be assayed for soluble substances. Aspiration of these blisters individually over several days allows assessment of changes which may occur as a result of natural disease activity or of treatment. Moreover, since these cells are viable when removed from the blister, it is possible to measure some functional activities of cells removed directly from the lesions.

Typical tuberculoid and lepromatous lesions sampled in this manner contained different percentages of mononuclear cell subsets, analagous to the results in biopsies (Rangdaeng *et al,* manuscript in preparation), but contained very similar levels of sIL-2R[47]. This suggests that even with very different numbers of phenotypic helper and suppressor cells, a similar state of immunologic equilibrium may exist within these different lesions. This equilibrium is presumably reached long before the patient is symptomatic or sees a physician.

Reactional states in leprosy are believed to be immunologically mediated, and may therefore represent temporary, spontaneous deflections or disequilibrium in local immunoregulatory processes. Examining the changes that take place immediately before and during reactions, as well as those which take place as the lesion returns to its "normal" baseline state, therefore, may not only provide information about the reaction, but also offer a unique perspective on the baseline state itself.

Immunohistochemical studies have shown that in reversal reactions, the percentage and number of T-helper cells is increased, as is the number of cells bearing the Tal activation marker[43,48]. In many cases, the number of IL-2R-bearing cells in the epidermis is increased, and these cells are in contact with Langerhans cells[40]. We have also observed that several lesions undergoing reversal reactions had very high levels of sIL-2R[47]. After treatment of such patients (with corticosteroids) for several weeks, sIL-2R in serum[49] and skin[40] have been observed to fall to baseline levels. Some preliminary data indicates that this may not happen within the skin lesion during the first few days of treatment, even though the clinical symptoms may resolve very rapidly[47], suggesting that the initial effects may be on the basis of inflammatory rather than immunologic processes.

The human response to PPD is characterized by similar cellular events[50,51] and increases in sIL-2R[52]. The observations on reversal reactions therefore support the clinical impression that they are due to changes in DTH and CMI responses to leprosy bacilli, although the antigens and mechanisms responsible are not yet defined.

ENL lesions contain greater numbers and percentages of T-helper cells than are seen in baseline LL-BL Lesions[53], as well as greater numbers of IL-2-producing cells[39]. We have found increased expression of IL-2R on epidermal cells in patients with recurrent ENL[40], and in some cases soluble IL-2R have been increased prior to treatment[47]. In preliminary studies, we have also found elevated levels of anti-*M. leprae* antibodies in ENL lesions (Scollard and Douglas, unpublished observations).

Injury to peripheral nerves is of major importance in leprosy, but all of the studies discussed here have involved skin lesions, since they are the most readily observed and tested. The immunologic and inflammatory processes in skin and peripheral nerves are presumed to be the same, but this has not been proven, and it is possible that additional mechanisms of neural injury are involved. Few investigators have dealt with this important but difficult issue[54-56], and hopefully several of these new research tools can be applied to nerve studies as well.

Advanced technology is being applied to many other areas of leprosy research, including the cloning of relevant cells and genes, synthesis of *M. leprae* antigens, and exploration of molecular mechanisms of immunoregulation [reviewed in[57]]. The techniques now available for *in situ* investigation furnish us not only with the means of explore natural events within lesions, but should also provide the means to assess new therapeutic or preventive measures by evaluating their effects on specific immunologic parameters *in vitro,* before submitting all such new regimens to prolonged, costly clinical trials.

Summary

The spectral concept of immune responses in leprosy was originally based primarily on clinical and histologic observations. Subsequent studies of immunologic function have primarily used peripheral blood lymphocytes *in vitro* to demonstrate and examine the specific unresponsiveness of lepromatous cells to *M. leprae.*

The composition of cells in leprosy lesions, however, is very different from that in the peripheral blood, and detailed studies of human skin lesions *in situ* are now possible using immunohistochemical techniques, injecting lymphokines directly into the lesions, cloning cells from biopsies, and using suction-induced blisters to sample intra-lesional cells and tissue fluid.

Such studies have shown that T-helper cells outnumber T-suppressor cells in tuberculoid leprosy, and that this is reversed in lepromatous leprosy. Distinctive microanatomic distributions of some cell types have also been correlated with clinical immune status. Production of gamma-interferon upon stimulation with *M. leprae* is reduced in lepromatous disease; the associated failure of macrophage activation can be reversed *in vivo* with recombinant gINF. Soluble IL-2R is present in comparable quantities in all types of uncomplicated lesions, suggesting a state of immunologic equilibrium across the spectrum, but reversal reaction lesions contain higher levels of sIL-2R and greater numbers of activated cells.

Together, this array of new techniques for the study of the immunopathology of leprosy *in situ* are dramatically changing the pace and the direction of research in this disease.

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REFERENCES

1. Virchow R: "Virchow's Leprosy; From Die Krankhaften Geschwulstr" (1863). Transl. by G.L.L. Fite: *Int J Lepr* 22:71-79, 1954.

2. Skinsnes OK: "Immunopathology of leprosy: The century in review." *Int J Lepr* 41:329-360, 1973.

3. Skinsnes, OK: "The immunological spectrum of leprosy" in *Leprosy in Theory and Practice,* R.C. Cochrane and T.F. Davey, eds., Williams and Wilkins Co., Baltimore, 1964.

4. Ridley DS, and Jopking WH: "Classification of leprosy according to immunity. A five-group system" *Int J Lepr* 34:255-273, 1966.

5. Bjune G: "Reactions in Leprosy" *Lepr Rev 54* (Special Issue): 61S-67S, 1983.
6. Jopling WH: "Leprosy Reactions (reactional states)". In: *Handbook of Leprosy,* William Heiemann Medical Books, London, p. 42, 1971.
7. Godal T, Myrvang B, Samuel DR, Ross WF, & Lofgren M: "Mechanism of 'reactions' in borderline tuberculoid (BT) leprosy". *Acta Pathol. Microbiol. A suppl* 236:45-53, 1973.
8. Wemambu SNC, Turk JL, Waters MFR, and Rees RJW: "Erythema Nodosum Leprosum: a clinical manifestation of the Arthus phenomenon." *Lancet* 2:933-935, 1969.
9. Tung KSK, Kim B, Bjorvatn B, *et al:* "Discrepancy between Clq Deviation Cell Tests in Detection of Circulating Immune Complexes in Patients with Leprosy". *J Inf Dis* 136:216-221, 1977.
10. Sansonetti P, and Lagrange PH: "The immunology of leprosy: Speculations on the leprosy spectrum". *Rev Infect Dis* 3:422-469, 1981.
11. Bloom BR, and Mehra V: "Immunological unresponsiveness in leprosy" *Immunol. Rev.* 80:5-28, 1984.
12. Bloom BR: "Learning from Leprosy: A Perspective on Immunology and the Third World". *J. Immunol.* 137:i-ix, 1986.
13. Myrvang B, Godal T, Ridley DS, Froland SS, and Song YK: "Immune responsiveness to *Mycobacterium leprae* and other mycobacterial antigens throughout the clinical and histopathological spectrum of leprosy" *Clin. Exp. Immunol.* 14:541-553, 1973.
14. Haregewoin A, Godal T, Mustafa AS, Belehu A and Yemaneberhan T: "T-cell conditioned media reverse T-cell unresponsiveness in lepromatous leprosy" *Nature* 303:342-244, 1983.
15. Ottenhoff THM, Elferink DG and de Vries RRP: "Unresponsiveness to *M. leprae* in lepromatous leprosy *in vitro:* Reversible or not?" *Int J Lepr* 52:419-422, 1984.
16. Mustafa AS, Haregewoin A and Godal T: "Response to letter of Dr. Ottenhoff *et al". Int J Lepr* 52:424, 1984.
17. Mohagheghpour N, Gelber RH, Larrick JW, *et al:* "Defective cell-mediated immunity in leprosy. Failure of T cells from lepromatous leprosy to respond to *M. leprae* is associated with defective expression of interleukin-2 receptors and is not reconstituted by interleukin-2" *J Immunol* 135:1443-1449, 1985.
18. Nogueira N, Kaplan G, Levy L, *et al:* "Defective gamma inferferon production in leprosy. Reversal with antigen and interleukin-2". *J Exp Med* 158:2165-2170, 1983.
19. Nathan CF, Kaplan G, Levis WR, *et al:* "Local and systemic effects of intradermal recombinant interferon-gamma in patients with lepromatous leprosy". *New Engl J Med* 315:6-15, 1986.
20. Kaplan G, Nusrat A, Sarno EN, *et al:* "Cellular Responses in the Intradermal Injection of Recombinant Human gamma Interferon in Lepromatous Leprosy Patients". *Am J Pathol* 128:345-353, 1987.
21. Scollard DM, Gardner ID, Lawton J: "Phagosome-Lysosome Fusion in Human Macrophages After Ingestion of *Mycobacterium leprae".* Submitted for publication.
22. Holtzer TJ, Nelson KE, Schauf V, Crispen RG, and Anderson BR: *"Mycobacterium leprae* fails to stimulate phagocytic cell superoxide anion generation". *Inf Immun* 51:514-520, 1986.
23. Stoner GL, Touw J, Belehu A, Naafs B: *"In-vitro* lymphoproliferative response to *M. leprae* of HLA-D-identical siblings of lepromatous leprosy patients" *Lancet ii:* 543-547, 1978.
24. Mehra V, Brennan PJ, Rada E, Convit J and Bloom BR: "Lymphocyte suppression in leprosy induced by unique *M. leprae* glycolipid". *Nature (London)* 308:194-196, 1984.
25. Koster FT, Scollard DM, Umland ET, *et al:* "Cellular and humoral immune response to a phenolic glycolipid antigen (Phen GL-1) in patients with leprosy" *J Clin Microbiol* 25:551-556, 1987.
26. Cantrell DA & Smith K: "The interleukin-2 system. A new cell growth model". *Science* 224:1312-1317, 1984.
27. Skinsnes OK: "Lysosomal contrasts in the immunological polar dichotomy of leprosy" In *Lysosomes in Applied Biology and Therapeutics, #6,* ed. JT Dingle, IH Shaw, pp. 131-148. Amsterdam, North-Holland, 1979.
28. Klebanoff SJ, and Shepard CC: "Toxic effect of the peroxidase-hydrogen peroxidase-halide antimicrobial system on *M. leprae". Infect Immun* 44:534-536, 1984.
29. Sharp AK, Colston MJ, and Banerjee PK: "Susceptibility of *M. leprae* for the bactericidal activity of mouse peritoneal macrophages and to hydrogen peroxide". *J Med Microbiol* 19:77-84, 1985.
30. Johnstone PAS: "The Search for Animal Models of Leprosy". *Int J Lepr* 55:535-547, 1987.
31. Skamene E, Gros P, Forget A, Patel PJ, and Nesbitt MN: "Regulation of resistance to leprosy by chromosome 1 locus in the mouse". *Immunogenetics* 19:117-124, 1984.
32. Ottenhoff THM & de Vries RRP: "HLA Class II Immune Response and Suppression Genes in Leprosy" *Int J Lepr* 55:521-534, 1987.
33. Bach MA, Chatenoud L, Wallach D, Tuy FP, and Cottenot F: "Studies on T cell subsets and function in leprosy". *Clin Exp Immunol* 44:491, 1981.
34. Van Voorhis WC, Kapan C, Sarno EN, *et al:* "The cutaneous infiltrates of leprosy" *N Engl J Med* 307:1593, 1982.
35. Rea TH, Bakke AC, Parker JW, Modlin RL, and Horwitz DA: "Perpheral blood T lymphocyte subsets in leprosy". *Int J Lepr* 52:311-317, 1984.
36. Longley J, Haregewoin A, Yemaneberhan T, *et al: "In vivo* responses to *M. leprae:* antigen presentation, interleukin-2 production, and immune cell phenotypes in naturally occurring leprosy lesions." *Int J Lepr* 53:385-394, 1985.
37. Modlin RL, Gebhard JF, Taylor CR, and Rea TH: *"In situ* characterization of T lymphocyte subsets in the reactional states of leprosy" *Clin Exp Immunol* 53:17, 1983.
38. Rea TH: "Suppressor cell activity and phenotypes in the blood or tissues of patients with leprosy" *Clin Exp Immunol* 54:298-304, 1983.
39. Modlin RL, Mehra V, Jordan R, Bloom B, and Rea TH: *"In situ* and *in vitro* chracterization of the cellular immune response in *Erythema Nodosum Leprosum". J. Immunol* 136:883-886, 1986.
40. Scollard DM, Rangdaeng SR, Suriyanond V, Chang PHC and Theetranont C: "Increased Epidermal IL-2R+ Cells in Leprosy Reversal Reactions". *Lab Invest* 56:70A, 1987 (full manuscript in preparation).
41. Modlin RL, Hofman FM, Taylor CR, and Rea TH: *"In situ* characterization of T-lymphocyte subsets in leprosy granulomas" *Int J Lepr* 50:361, 1982.
42. Modlin RL, Hofman FM, Horwitz DA, *et al: "In Situ* identification of cells in human leprosy granulomas with monoclonal antibodies to IL-2 and its receptor" *J Immunol* 132:3085-3090, 1984.
43. Shen J-Y, Hofman FM, Gunter JR, *et al: "In situ* Identification of Activated Tal+ Lymphocytes in Human Leprosy Skin Lesions". *Int J Lepr* 55:494-498, 1987.
44. Modlin RL, Kato H, Mehra V, *et al:* "Genetically restricted suppressor T-cell clones derived from lepromatous leprosy lesions." *Nature* 322:459-461, 1986.
45. Kiistala U, and Mustakallio KK: *In vivo* separation of epidermis by production of suction blisters. *Lancet* 1:1444, 1964.
46. Kenney RT, Rangdaeng S, and Scollard DM: "Skin blister immunocytology: a new method to quantify cellular kinetics *in vivo". J. Immunol Methods* 69:101-110, 1986.
47. Scollard DM, Suriyanond V, Wagner DK., *et al:* "Increased Levels of Intracutaneous Soluble Interleukin-2 Receptors (Tax Peptide) iin Leprosy Reversal Reactions". Submitted for publication.
48. Modlin RL, Beghand JF, Taylor CR, and Rea TH: *"In situ* characterization of T-lymphocyte subsets in the reactional states of leprosy". *Cin Exp Immunol* 53:17-24, 1983.
49. Tung KSK, Umland E, Matzner P, *et al:* "Soluble serum interleukin 2 Receptor levels in leprosy patients". *Clin Exp Immunol* 68:10-15, 1987.
50. Poulter LW, Seymour GJ, Duke O, Janossy G, and Panayi G: "Immunohistochemical analysis of delayed-type hypersensitivity in man" *Cell. Immunol* 74:358-369, 1982.
51. Kaplan G, Witmer MD, Nath I, *et al:* "Influence of delayed immune reactions on human epidermal keratinocytes". *Proc Nat Acad Sci USA* 83:3469-3473, 1986.
52. Scollard DM, Wagner DK, and Nelson DS: "Release of Interleukin-2 Receptors (Tac peptide) *in vivo* During Human Immune Responses to Tuberculin". *Clin Immunol Immunopathol,* in press.
53. Modlin RL, Baake AC, Vacarro *et al:* "Tissue and Blood T-Lymphocyte Subpopulations in Erythema Nodosum Leprosum". *Arch Dermatol* 121:216-219, 1985.
54. Antia NH, Pandya SS, and Dastur K: "Nerves in the arm in leprosy: Clinical, electrodiagnostic, and operative aspects". *Int J Lepr* 38:12-29, 1970.
55. Boddingius J: "Ultrastructural and histologic studies on the blood-nerve barrier and perineural barrier in leprosy neuropathy". *Acta neuropathol (Berl)* 64:282-296, 1984.
56. Chandi SM, and Chacko CJG: "An ultrastructural study of dermal nerves in early human leprosy". *Int J Lepr* 55:515-520, 1987.
57. Rook GAW: "Progress in the immunology of the mycobacterioses". *Clin Exp Immunol* 69:1-9, 1987.

To a New Patient:

Dear New Patient:

By all means, **do** be frightened. Be scared enough to seek help, because for you there is help. There is medication that does work and the sooner you get to a doctor and tell him what you suspect, the sooner you will be treated. Don't waste time. For you it will be good. You will not be put away like I was. Hopefully your hands and feet will remain normal. Your lifestyle will also remain the same but, I beg you, get treatment. If you don't, you lose. Waiting around for "it" to go away would be very stupid. Leprosy and what it does to your body will not run away. You must chase it away with treatment that is free for the taking. I tell you again, don't run away from it. Take care of your future. You can have it and if you are a patient and are given the medication, don't leave it in your medicine cabinet after taking it for a couple of months. Keep taking it. Good Luck!

Olivia Breitha
Resident of Kalaupapa

A Pictorial History of Leprosy Treatment in Hawaii



Dr. William J. Goodhue, Kalaupapa's "Pioneer Surgeon." Resident physician at the Settlement from 1902 to 1925, Goodhue developed treatment, performed surgery and conducted research.



Advertisement for J. Lor Wallach's "Indian Remedies," which included a cure for leprosy. At the turn of the century, such patent medicines flourished.



Clarence Naia receives his "food of the month" — Korean food from Kim Chee Il. Food offered each month varies from ethnic foods to pizza, hamburgers and fried chicken.



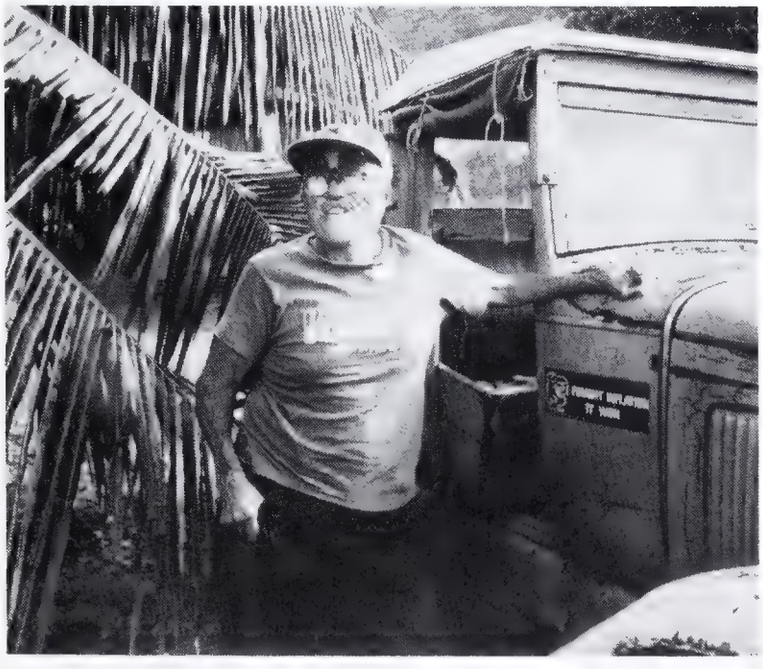
Brother Louis. In the early history of Kalaupapa, members of the religious community often provided the medical care.



Following on the heels of the sulfone drugs, Hale Mohalu Hospital was opened in Pearl City in 1949. Its goal was rehabilitation rather than simply custodial care and it provided an alternative to isolation at Kalaupapa. Between 1949 and 1969, only 32 patients were sent to Kalaupapa, all voluntarily.



The U.S. Leprosy Investigation Station was officially opened at the Settlement in 1909 and represented the first time that the U.S. Congress authorized a hospital for research on a specific disease. The hospital failed in its goals of research and treatment due to its isolated location and inability to attract patients. It was officially closed in 1913, never having had more than the original nine patients.



John Cambra, a Kalaupapa resident since 1924, has never had any desire to leave the Settlement permanently but enjoys an annual trip to Honolulu to visit relatives, attend St. Louis High School football games and eat chop suey. —Photo by Wayne Levin



Despite the advent of the sulfone drugs, fumigation of mail at Kalaupapa continued into the 1960s. In 1969, social progress finally caught up with medical knowledge and Hawaii's century-old isolation policies were officially abandoned.



Sent to Kalaupapa in 1928, Kenso Seki is well known for his friendly smile, the beautiful lamps he makes out of coconuts and his travels around the world, which have included places as diverse as China, Las Vegas, New Zealand and several National Parks. —Photo by Wayne Lewin

Progress in the Serology of Leprosy at the University of Hawaii

James T. Douglas PhD*

Serology in leprosy holds the promise of providing quantitative markers to aid in our understanding of interactions between M. leprae *and its hosts. The markers referred to are the antibody classes, or isotypes, of the host and the antigens of* M. leprae. *The key to the application of these markers has been the development of sensitive and specific immuno-assays based on accurate clinical and epidemiological information. Since 1980 we have been developing assays and using serology to study markers for early detection of leprosy prior to clinical onset of disease.*

We have also examined the influence of chemotherapy on antibody levels during treatment. We have not been alone in these efforts. Other able investigators (M Abe, SJ Brett, TM Buchanan, PJ Brennan, S-N Cho, M Harboe, SR Khanolkar, DB Young and others) have been pursuing one or both of these goals in different arenas. Their efforts have been extensively reviewed[1,2,3,4]. In this article we describe our serological research of leprosy in Hawaii, the Federated States of Micronesia and the Philippines.

Background

One of the intriguing aspects of leprosy is the diversity of immunological reactions manifest in the host. The study of the variety of host responses to infection with *M. leprae* provides one with a continuum, or spectrum, of manifestations of the immune response. The disease itself can only be recognized as a result of the damage produced by the host's immune system — a hypersensitivity reaction to *M. leprae*.

Our current understanding of the immunological basis of leprosy has its basis in the acceptance of the histopathological and histoimmunological classification of Ridley and Jopling[5,6]. This classification, based on the status of macrophage, lymphocyte, bacterial load and neural involvement has resulted in the establishment of the five major categories of frank disease: Tuberculoid (TT), Boderline Tuberculoid (BT), Borderline (BB), Borderline Lepromatous (BL), and Lepromatous (LL).

In addition, there is an Indeterminate (I) classification used to describe early lesions of leprosy, or a condition where host resistance is sufficient to prevent further progression to frank disease. Indeterminate disease is identified when a few, or single acid fast bacillus (AFB), is seen in association with a nerve, but a distinctive pattern of infiltrate has not yet matured to a point where it can be recognized as one of the five categories previously mentioned[7]. Also, the classification is expanded by some workers to include an extended version of the LL category: Lepromatous subpolar (LL_s) and Lepromatous polar (LL_p).

Beyond these initial classifications, one must take into account the reactional states of leprosy type II, erythema nodosum leprosum (ENL), and type I, reversal reaction[8]. These reactions are hypersensitivity responses that may result in a patient coming to the clinic for the first time, or which may occur during the first two years of chemotherapy as treatment effects changes in the bacterial load. Consideration of the seven distinct classifications, and the two main reactional states, as well as fluctuation in BI as a result of treatment that can be super-imposed, leads to an appreciation of the complexity of leprosy.

It is generally accepted that the immune response is divided into two major arms: Cell-mediated immunity (CMI) and antibody mediated response (AMI) or humoral response. More specifically, in leprosy the CMI response predominates in the TT and BT end of the spectrum, with a shift toward the dominance of an AMI response as one moves through the BB, BL to LL end of the spectrum[9].

Histopathological sections show an increasing disorder of the effector cells of the immune system as the spectrum shifts from TT to LL[10,11]. As one moves across the spectrum from TT to LL, there is a loss of delayed-type hypersensitivity (DTH) to the skin test antigens of *M. leprae*[9].

More recently, an additional classification scheme for leprosy has been established by the World Health Organization (WHO) to assist in efforts to develop multi-drug therapy (MDT) programs for leprosy-control projects.

The spectrum of disease is broken into two groups: Multibacillary (MB) and Paucibacillary (PB)[12]. This classification scheme is based on the bacterial index (BI) of the patient. The BI ranges from 0 to 6 based on the number of bacilli seen in a sample taken from a lesion. For example, a BI of 6 equals > 1000 AFB per oil-immerson field and a BI of 0 equals no AFB per 100 fields[13]. A multibacillary case has a BI of 2 or greater (1-10 AFB/10 fields); a paucibacillary case has a BI of less than 2. In general this would include classes I, TT and BT as PB, and BB, BL and LL as MB.

In our laboratory we apply both the classification schemes of Ridley and Jopling and the WHO scheme for MDT as standards to which to relate our findings. With these criteria as standards the main direction our research has taken is to investigate the effects of anti-microbial therapy on the antibody response to *M. leprae* during the course of treatment, as well as to measure development of the antibody response in contacts of leprosy

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patients.

The immuno-assay we have extensively employed is the ELISA[14,15,16,17]. We developed a unique volatile antigen-coating buffer. All of our ELISA antigens are suspended in a 0.01 M, pH 8.2 ammonium acetate/carbonate buffer and dried onto microtiter plates overnight at 37°C[16]. This method has resulted in antigen-coated plates that remain stable at room temperature for more than a year and that can be easily shipped to other laboratories in the Pacific.

During the course of our research, we have evaluated seven *M. leprae* antigens: Whole *M. leprae* and PG-I phenolic glycolipid, isolated from the tissues of armadillos, and five neoglycoprotein antigens, which mimic the terminal, two-terminal and all three sugars of the PG-I of *M. leprae*[17,18]. These semisynthetic neoglycoprotein antigens are: (a) M-BGG, a synthetic antigen representing the terminal sugar of PG-I conjugated to bovine gamma globulin, (b) ND-O-BSA, NT-O-BSA (natural di- and trisaccharides with octyl linkage to bovine serum albumin), and (c) ND-P-BSA, NT-P-BSA (natural di- and trisaccharides with a phenolic ring attached to BSA by a linker arm)[19,20,21,22,23]. The octyl linked antigens: ND-O-BSA, NT-O-BSA and whole *M. leprae* were provided under NIH contract (NO1 AI-52582) by Dr. P. Brennan, Colorado State University. The phenol-linked ND-P-BSA and NT-P-BSA were provided by Dr. Fujiwara of Nara University through a grant from the Western Regional Office of the Pacific, World Health Organization, Manila. Brennan has provided a more thorough review of these antigens and their development elsewhere[24]. The sera used in our ELISA have been collected and maintained in an extensive sera bank catalogued by computer in a data base. Our collection represents more than 20,000 sera from the Philippines, Micronesia and Hawaii.

Early Detection of Leprosy

Before the synthetic antigens became available, we compared whole cell *M. leprae* and PG-I antigens for their usefulness in the detection of antibody prior to onset of disease. The ELISA conjugate we used in this study detected IgM, IgG and IgA. Initially, testing subsets of populations free of leprosy but from endemic areas in Micronesia, we found that 6% (10/165) were positive to PG-I and 5% (1/20) were positive to *M. leprae*.

Of these reactive sera, 4.2% (7/165) were weakly positive and 1.8% (3/165) were strongly positive to the PG-I. In our first report on early detection in 1983, examining 32 biopsy-established cases with *M. leprae* ELISA, we found that 94% of the patients were antibody positive prior to clinical diagnosis. Of those positive, 41% (13/32) were weakly positive, and 53% (17/32) were strongly positive. Although all the classifications of leprosy were represented by positive ELISA reactions prior to onset of disease, one could not predict the type of leprosy that subsequently developed, by ELISA reactivity, i.e., both MB and PB individuals exhibited both strong and weak positive ELISA reactions prior to onset of disease. We also found that elevated antibody levels to these antigens occurred in patients up to two years before disease was recognized[15,25,26].

Our second study on early detection of leprosy was the comparison of the reactivity of *M. leprae* and PG-I, using an IgGAM conjugate-based ELISA. We extended our series from 32 cases to 47 cases, looking retrospectively at sera collected in Micronesia prior to onset of clinical disease. We found that the average age of onset was between 10 and 15 years of age. Of the 47 biopsy proven cases examined, 95% (43/47) of the patients were found to be positive by ELISA to one or both antigens up to two years before onset of disease. The PG-I antigen-based ELISA was positive in 78% (37/47) prior to onset of disease and the *M. leprae* ELISA was positive in 91% (41/47) prior to onset. In light of the low background of ELISA reactivity with individuals who are presumably free of leprosy, 6% in this endemic area with these antigens, the above promising results indicated that it may be possible to detect leprosy infection prior to onset of disease. This led to a blind prospective study based at the Leonard Wood Memorial Leprosy Research Laboratory in Cebu, Philippines[26,27].

In recent studies, background levels were set for an anti-IgM ELISA with four new synthetic antigens representing the serologically specific epitopes of the PG-I molecule: ND-O-BSA, NT-O-BSA and ND-P-BSA, NT-P-BSA. Sera from 832 individuals known to be free of leprosy and living amid endemic and non-endemic populations were collected. The first population was represented by 401 samples collected from an endemic area in the Philippines and the second (non-endemic) population consisted of 431 sera from Chicago. Of the 832 sera, one from Chicago was strongly reactive. The remaining reactive sera were weakly positive and within 0.15 OD units of the positive/negative cutoff point of the assay. Of the endemic sera, 1.2% (5/401) were positive to all four antigens and 2.4% (10/401) reacted with NT-O-BSA. In the sera from the non-endemic area, 1.1% (5/431) reacted with at least one of the four antigens and 0.7% (3/431) were positive to all antigens. Five sera responded to NT-O-BSA and NT-P-BSA[28].

As a further test of the specificity of these antigens, 64 sera from active tuberculosis cases were examined. One of the sera from these patients was weakly positive, a positive rate of 1.6% (1/64) in this population. This low reactivity rate indicates the high specificity of these antigens. The results of the tests indicated that the addition of the phenol ring in the ND-P-BSA or NT-P-BSA antigens did not improve specificity. The addition of the third sugar to the disaccharide antigens resulted in only a slight increase in the reactivity rate of these normal populations with decreasing specificity[28].

Our most recent results in early detection are found in the preliminary findings from a continuing prospective study on early detection of leprosy, which was initiated in August 1984 in Cebu, Philippines. The data presented are based upon detection and prevalence of antibody to the semi-synthetic disaccharide. (ND-O-BSA), among contacts of new lepromatous patients compared with a non-contact control population. Contacts were classified as household members of lepromatous patients, who had to have lived in association with the patient(s) for at least three years prior to the diagnosis and the start of multi-drug therapy. The controls were not known to be contacts of lepromatous patients and were screened at the Leonard Wood Memorial Skin Clinic and found to be free of leprosy.

We found that serum samples from 36 of 321 contacts contained antibodies which reacted with this synthetic antigen. The prevalence of antibody-positive people in the control group from this endemic area was 7 out of 401 by ELISA. Thus, the sero-positive rate was 11.2% for contacts and 1.7% for the control group[28,29].

In addition to measuring the prevalence of antibody in contacts, we have been following antibody levels in these subjects in a prospective fashion to ascertain the relationship between sero-positivity and the development of disease. Although the length of the incubation of this disease is known to be three to seven years or more, we have been able to acquire some preliminary data on household contacts.

Our study has been in progress for two years and of the 36 sero-positive contacts we have been following, 3 have developed disease; this represents an 8.3% attack rate for sero-positive contacts. One of the 285 sero-negative contacts also has de-

veloped disease. This represents a 0.4% attack rate for sero-negative contacts. Thus, there is an approximately twentyfold higher risk of developing the disease among the sero-positive contacts (over this two-year period of observation). It should be noted that these data are preliminary. Higher numbers tested and a longer observation time will be required to obtain statistical significance of the relative risk of developing disease.

The ELISA data for the sero-positive contacts who have developed disease can be seen in Table I. Case #C-177 was antibody-positive four months prior to clinical onset; case #C-089 was positive for six months before clinical onset and case #C-013 was sero-positive for more than 24 months before recognition of disease. An individual serum was considered positive if the reactivity to ND-O-BSA antigen exceeded 0.15 units (OD_{492}). The age of onset varied from 13 to 16 years. The ELISA reactivity found in a subset of 88 of the non-contact controls, with an age range from 11 to 20 years, was 0.03 ± 0.03 s.d. (OD_{492}) and did not differ from the reactivity found in the total control population. In addition, the three sero-positive contacts were found by biopsy to have BI of 4 or higher at the time of diagnosis, whereas the sero-negative contact, #C-120, who developed disease, had a BI of 1 (2 AFB found).

As can be seen in Table II, the four cases were clinically classified as indeterminate (I). However, when the biopsies were examined by histopathology, the sero-positive cases were classified as BL and the sero-negative case as Indeterminate[7]. None of the workers involved in performing the ELISA, reading the biopsy results or making the clinical evaluation was aware of the others' findings. These findings are consistent with early detection of disease[29].

Another observation in this study was the finding that only 18% of the 106 index cases were associated with the sero-positive contacts. This preliminary data may indicate that about one out of five lepromatous cases have the ability to inoculate other individuals. Thirty-five percent of the families of the sero-positive contacts contained more than one positive individual. This indicated a clustering of sero-reactive individuals around index cases that have an increased ability to infect with the organism. However, another explanation for this phenomena might be a higher familial susceptibility[29].

TABLE 1
ELISA Data for contacts of lepromatous cases developing disease

Contacts	Specimen Number[a]				
	1	2	3	4	5
ELISA Positive					
C-013	0.48[b]	0.67	0.78	*0.54	0.71
C-089	0.07	0.15	0.16	*0.24	
C-177	0.05	0.12	0.25	*0.22	
ELISA Negative					
C-120	0.01	0.01	*0.06	0.03	

Test controls: Mean OD_{492} Values of pooled sera. Negative 0.03, high positive 1.25, low positive 0.34, conjugate 0.02.

* Onset by clinical diagnosis.

a. Specimen number represents 6 month time interval between sera collections.

b. Underlined values indicate positive ELISA test. The ELISA is positive when the OD_{492} values are greater then 0.15.

TABLE 2
Classification of the type of early disease developed among ELISA positive and negative household contacts of lepromatous patients.

New Cases Among	Clinician		Pathologist	
Contacts	Type	BI[a]	Type	BI[b]
ELISA Positive Cases				
Male - 13 Yrs. (C-013)	I	2.3+	I/BL	4.0+
Male - 15 Yrs. (C-089)	I	1.3+	BL	4.0+
Male - 16 Yrs. (C-177)	I/BL	4.7+	I/BL	5.0+
ELISA Negative Case				
Male - 13 Yrs. (C-120)	I/TT	0.3+	I	2 AFB

a. BI determined by skin slit smear.
b. BI determined from biopsy.

Effects of Treatment on Antibody Levels in Lepromatous Leprosy

In a study of 22 lepromatous patients who had received dapsone for three to four years, we compared the reactivity of whole-cell ELISA antigens *(M. leprae)* with two specific antigens, PG-I and M-BGG, for their effectiveness in measuring antibody over the course of chemotherapy[30,31]. By the end of the first year of treatment, levels of antibody to M-BGG had declined by 42% of the initial ELISA values, by 61% at the end of the second year and by 68% at the end of the three years.

Declines of similar magnitude were seen with the other two antigens. We found that the decline in antibody levels as detected by ELISA correlated well with decline in the bacterial index, and that such declines continued with length of treatment. The mean antibody level declined by 68% of the starting level; the mean bacterial index was found to decline from 4.7 to 2.1 over the three-year period.

In order to evaluate the influence of treatment on total immunoglobulins, we examined these sera by RID for changes in levels of IgG, IgM and IgA antibodies. The levels of IgG remained abnormally high, with a mean range from 2716 ± 512 s.d. to 2244 ± 805 over the three years of anti-microbial therapy. The serum levels of IgM and IgA antibodies remained at the upper limits of the normal range. The decline seen with antibody to *M. leprae* antigens was not reflected by a similar decline of serum immunoglobulin levels. This indicated the lack of a relationship between total immunogloblins and specific anti *M. leprae* antibodies[30,31].

Summary

As new and more specific antigens in leprosy have been discovered, we have found increasing application for serological studies. There is mounting evidence that patients make antibody to *M. leprae* antigens up to two years prior to onset of disease. Preliminary studies in the Philippines of detection of anti PG-I IgM antibody in contacts indicates they have an increased risk of developing MB disease. Earlier studies conducted in Micronesia may also suggest that anti *M. leprae* IgG antibodies indicate an increased risk of developing PB as well. However, this will require further study.

We have demonstrated low, background levels of anti-PG-I immunoglobulins in screened "normal" populations of 1% to

2%, which should suggest the use of ELISA for screening in contact populations. We have also found the highest risk group to be between the ages of 10 and 16, i.e., in school-age populations. This finding should indicate the value of screening of this group in our Pacific populations, because this susceptible population, for most of the year, is found in the local schools, rather than dispersed in separate households.

In addition to our investigations on the early detection of leprosy, we have also looked to serology to provide clues on the progress of treatment. Where antibody was present we found that, following treatment over time, declines in specific antibody could be detected. These declines paralleled the decline in BI and may be a more sensitive measure of treatment success. The monitoring of levels of antibody to *M. leprae,* after diagnosis, may also warn of treatment failure as indicated by an increase in titer or a persistence of high levels of specific antibody.

We have evaluated several antigens and find the most useful to be the ND-O-BSA antigen. Unfortunately, none of the antigens we have evaluated work well with the PB end of the spectrum; also, they have not yet shed light on the reactional states of leprosy.

We did find a subset of BT patients (18%) who do have elevated antibodies to these antigens. Preliminary data indicate this group has a higher risk of relapse. Fortunately, the antigens work well with the MB and especially the LL patients, where 94% were positive. It is the MB group that has been associated with transmission of disease in leprosy.

In conclusion, we have developed several ELISA-based immuno-assays that have proved useful in investigating early detection of disease and the monitoring of anti-microbial therapy.

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REFERENCES

1. Editorial, Serological tests for leprosy. *The Lancet,* March 8, 1:533-535, 1986.
2. Seckl MJ. Monoclonal antibodies and recombinant DNA technology: Present and future uses in leprosy and tuberculosis. *Int J Lepr.* 53:618-640, 1985.
3. Harboe M. Significance of antibody studies in leprosy and experimental models of the disease. *Int J Lepr* 50:342-350, 1982.
4. Gaylord H and Brennan PJ. *Leprosy: Antigen and host-parasite interactions.* In Parasite Antigens: Towards New Strategies in Vaccines. (ed. TW Pearson) Marcel Dekker, Inc. NY. and Basel. 49-89, 1986.
5. Ridley DS and Jopling WH. A classification of leprosy for research purposes. *Leprosy Review* 33:119-128, 1962.
6. Ridley DS and Jopling WH. Classification of Leprosy according to immunity — a five group system. *Int J Lepr* 34:255-273, 1965.
7. Ridley DS and Job CK. The pathology of leprosy. In *Leprosy* (edited by R C Hastings) Churchill Livingstone: New York, p. 100-133, 1985.
8. Jopling WH. Leprosy reactional states. In *Hand book of leprosy.* William Heinemann Medical Books, London, p. 42, 1971.
9. Bullock WE. Leprosy: A Model of Immunological Perturbation in Chronic Infection. *J Inf Dis* 137:341-354, 1978.
10. Modlin RL, Hofman FM, Meyer PR, Sharma OP, Taylor CR, and Rea TH. In situ demonstration of T-lymphocyte subsets in granulomatous inflammation: leprosy, rhinoscheroma and sarcoidosis. *Clin and Exper Immun* 51:430-438, 1983.
11. Scollard DM. A review of immunolpathologic studies of leprosy lesions in situ. *Hawaii Med J.*
12. World Health Organization Report of a study group: Chemotherapy of leprosy for control programmes. *WHO Technical Report Ser* 675, 1982.
13. Reese RJW. The microbiology of leprosy. In *Leprosy* (edited by R C Hastings) Churchill Livingstone: New York, p. 31-52, 1985.
14. Douglas JT, Naka SO and Lee JW. Leprosy ELISA Antigen Coating Buffers and Antigens: Comparison of *M. leprae* whole cells with other Mycobacteria. Seventeenth Joint conference On Leprosy Research, U.S.-Japan Cooperative Medical Science Program, pg. 316-327, Sendai, August 1982.
15. Douglas JT, Worth RM, Murry CJ, Shaffer JS, and Lee JW ELISA Techniques with Application to Leprosy. University of Hawaii. In Proceedings of the Workshop on Serological Tests for Detecting Subclinical Infection in Leprosy pg. 85-90. Sasakawa Memorial Health Foundation, Tokyo. 1983.
16. Douglas JT, Naka SO, and Lee JW. Development of an ELISA for Detection of Antibody in Leprosy. *Int J Lepr* 52:19-25, 1984.
17. Douglas JT, Davis GA, Madarang MG, and Wu QX. Evaluation of Inexpensive Blocking Agents for ELISA in the Detection of Antibody in Leprosy. *Lep Rev* In Press. 1987.
18. Hunter SW, and Brennan PJ. A Novel Phenolic Glycolipid from *Mycobacterium leprae* Possibly Involved in Immunogenicity and Pathogenicity. *J Bact* 147:728-735, 1981.
19. Chatterjee D, Douglas JT, Cho S, Rea TH, Gelber RH, Aspinall GO, and Brennan PJ. Synthesis of Neoglycoconjugates Containing the 3, 6-di-O-Methyl-B-D-Glucopyranosyl Epitope and Use in Serodiagnosis of Leprosy. *Glycoconjugate Journal* 2:187-208, 1985.
20. Chatterjee D, Cho SN, Brennan JP, and Aspinall GO. Chemical synthesis and seroreactivity of the 0- (3, 6-di-O-methylbeta-D-glucopyranosyl) - (1-±9)-oxynonanoyl-bovine serum albumin- the leprosy specific, natural dissaccharide-octal neoglycoprotein. *Carbohydrate J* 156:39-56, 1986.
21. Fujiwara T, Hunter SW and Brennan JP. Chemical synthesis of disaccharides of the specific phenolic glycolipid antigens from *Mycobacterium leprae* and of related sugars. *Carbohydrate Res* 148:287-298, 1986.
22. Fujiwara T, Aspinall GO, Hunter SW, Brennan PJ. Chemical Synthesis of the Trisaccharide unit of the species-specific phenolic glycolipid from *Mycobacterium leprae. Carbohydrate Res.* 163:41-52, 1987.
23. Fujiwara T, Izumi S. Synthesis of the neoglycoconjugates of phenolic glycolipid-related trisaccharides for the serodiagnosis of leprosy. *Agric Biol Chem* 51:(9), 2539-2547, 1987.
24. Brennan JP. The Carbohydrate containing antigens of *M. leprae.* Symposium on the Immunology of leprosy, Oslo, Norway. *Lepr Rev* 57:Suppl. 2, 39-51, 1986.
25. Douglas JT, and Worth RM. Field Evaluation of an ELISA to detect Antibody in Leprosy Patients and their Contacts. *Int J Lepr* 52:26-33, 1984.
26. Douglas JT, Murry CJ, Lee JW, Worth RM. Comparison of ELISA Antigens for Early Detection of Leprosy. In: Proceedings of the XII International Leprosy Congress: paper 370. 1984.
27. Douglas JT, Steven LM. Comparison of Natural and Synthetic Antigens for the Early Detection of Leprosy. Proc. 11th joint Conf. Leprosy and Tuberculosis, US-Japan Coop. Med. Sci. Prog. Tokyo, Aug. 1984, p. 143.
28. Douglas JT, Steven LM, Cellona RV, Madarang MG and Nelson KE. Prevalence of antibody to synthetic antigens of *Mycobacterium leprae* in the populations of endemic and nonendemic areas. Abstracts of 87th Annual Meeting of American Society for Microbiology. p. 127, U10. March 2, 1987.
29. Douglas JT, Cellona RV, Abalos RM, Madarang MG and Fajardo TT. The serological Reactivity and Early Detection of Leprosy Among Contacts of Lepromatous Patients in Cebu, Philippines. In press, *Int J Lepr* 1987.
30. Douglas JT, Steven LM, Fajardo T, Cellona RV, Madarang MG, Steenbergen GJ. The Effects of Chemotherapy on Antibodies to Natural and Synthetic *M. leprae* Antigens and Class Specific Immunoglobulins in Lepromatous Filipino Patients. Abstracts of 86th Annual Meeting of American Society for Microbiology. p. 120, U7. March 24, 1986.
31. Douglas JT, Steven LM, Fajardo T, Cellona RV, Madarang MG, Abalos RM, and Steenbergen GJ. The Effects of Chemotherapy on Antibody Levels in Lepromatous Patients. In press, *Leprosy Review.* 1987.

Ocular Leprosy

Donald A. Sroat MD*

Hansen's disease (HD) found a particularly fertile soil among native Hawaiians and had assumed epidemic proportions by the 1860s. Its incidence peaked in the 1890s when as many as 1200 patients were at Kalaupapa.[1] Thereafter the incidence of new cases began to drop rapidly. Today there are approximately 80 patients voluntarily residing at Kalaupapa and approximately 500 to 600 outpatients scattered throughout the State. Most newly discovered cases are immigrants from Southeast Asia, the Philippines, Samoa and Micronesia.[2]

Leprosy has protean manifestations throughout the body. Some of these manifestations are minor but others seriously affect the structure and function of the involved areas. It is variously estimated that 25% to 70% of leprosy patients will eventually show the effects of the disease in their eyes[3,4]. A significant number of these patients will have potentially blinding ocular complications. The potential for serious ocular damage is rather easily recognized and physicians in endemic areas such as Hawaii should be able to recognize those forms of ocular Hansen's disease that may result in serious visual consequences.

Bacteriology

The causative agent of Hansen's disease is the acid-fast bacillus, *Mycobacterium leprae. M. leprae* is an intracellular parasite that favors the cooler regions of the body such as the skin, peripheral nerves, and the anterior segment of the eye. This bacillus was found to be associated with the disease in 1874 by the Norwegian physician, Armauer Hansen. There are roughly 15 million patients worldwide with leprosy.[5] The mode of transmission of the disease is unclear. It is probably spread from nasal mucosal discharges which can contain large numbers of bacteria in patients with lepromatous leprosy. No animal or insect vector is known to be involved.

Over 90% of human beings are thought to be naturally immune to the disease[6]. This is borne out by the fact that it is exceedingly rare for a health worker in the field to contract the disease. Susceptibility to the bacillus is apparently a complex relationship between exposure level, environment, and genetic susceptibility.

Exposure to the bacillus most often leads to no evident disease or to a subclinical form which may present as a transient, overlooked skin lesion. The few persons who do contract the disease probably do so on the basis of an impaired cell-mediated immunity to the bacillus. Once established in a host, the disease will express itself in a variety of ways depending upon the status of the individual's cell-mediated immunity. Those with a relatively strong cell-mediated immunity to leprosy develop the tuberculoid form of the disease, with relatively few live bacilli found in the skin and nerves.

If cell-mediated immunity is weak, the disease, which is known as lepromatous leprosy, becomes generalized and the skin, peripheral nerves, and mucosa contain many live bacilli. Between these two polar forms of the disease are the borderline tuberculoid and borderline lepromatous forms. It is not infrequent for a given patient to show some transition back and forth along this spectrum depending on the efficacy of treatment and the status of the immune system. (The immunology is discussed in greater depth in other articles in this issue of the JOURNAL).

Ocular Disease

The three major ways in which the eye is damaged in leprosy are: Corneal scarring secondary to lid paralysis (exposure keratopathy), direct bacillary invasion of the eye, and hypersensitivity reactions.

Exposure Keratopathy

The facial nerve is frequently infiltrated with *M. leprae* and the resultant inflammation of the nerve leads to paresis or paralysis of the orbiculoris oculi muscles. In the lepromatous form, there may also be a direct bacillary invasion of the orbicularis muscle fibers, which compounds the subsequent atrophy[7]. This results in an inability to properly close the eyelids (lagophthalmos) and is often compounded by sagging of the lower lids (ectropion) and misdirection inwards of the lashes (trichiasis). Improper eyelid closure causes tearing and can be aggravated by trichiasis and drooping upper lashes rubbing against the cornea. Lash drooping develops from bacillary infection of the orbicularis and subcutaneous tissues producing lid atrophy. The lagophthalmos and trichiasis combine to produce superficial corneal trauma which gradually causes increased scarring of the cornea and can lead to secondary infectious corneal ulcers.

These infectious corneal ulcers are not infrequent and patients may be tardy in seeking medical care because of the corneal anesthesia resulting from the bacillary destruction of the corneal nerves. The combination of tearing eyes, anesthetic corneas, and lagophthalmos forms a fatal triad for the eyes, leading to self-produced corneal injury with secondary infectious corneal ulceration.

Bacillary Invasion

In lepromatous leprosy, the eye is invaded via the bloodstream. The conjunctive, sclera, cornea, iris, and ciliary body are the predominant destinations, believed to be due to the preference of the bacillus for a cooler environment. Schwartz in

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a 1962 study found a 3 to 5°C. temperature differential between the iris and the body temperature in rabbits.[8] Leprosy is a disease of the anterior segment with no known specific involvement of the eye posterior to the ciliary body.

In the cornea the bacilli infiltrate the superficial corneal nerves forming many tiny granulomata which are seen with the slitlamp as intermittent beading of the nerves. With time, scarring of the superficial stroma occurs. Diffuse gray scarring, which can be appreciated with the naked eye and focal illumination, generally starts in the superior temporal quadrant and may spread around the periphery and occasionally into the central cornea. Occasionally a large granuloma (leproma) may occur in the cornea with disastrous results to the anterior segment of the eye.

The iris and ciliary body may undergo a fulminant focal infection or a more insidious, chronic invasion. In the former a large, yellowish, suppurative granuloma occurs. A purulent exudate forms in the anterior chamber of the eye and the anterior segment becomes massively deranged by scar tissue, ultimately resulting in the total destruction of the eye.[9] Fortunately this focal abscess form is rare.

The chronic, insidious form of infection is common. The bacilli are thought to have a predilection for the small autonomic nerve fibers in the iris and for the dilator muscle.[10] The exact mechanism of damage, whether neurotrophic, myositic, or a combination of the two, has not yet been resolved. What is seen clinically is a low-grade iritis associated with miosis poorly responsive to mydriatics, an atrophy of the pupillary frill and iris stroma, and occasionally iris "pearls." These pearls are whitish excrescences from the iris stroma which may drop into the inferior portion of the anterior chamber. Iris pearls are granulomata histologically consisting of clusters of macrophages filled with *leprae* bacilli.[11]

In our experience, this low-grade and usually painless iritis is next in frequency to corneal destruction as a leading cause of visual disability in HD patients. The miosis is often extreme and when combined with corneal problems, or later in life with cataract formation, causes marked visual impairment.

Hypersensitivity Reactions

Patients with lepromatous leprosy have high titers of precipitating antibodies to antigens of *M. leprae*. These antibodies do not seem to have any role in the body's defenses to *M. leprae*.[12] However, on occasion the relative concentrations of antigen and antibody become conducive to the formation of immune complexes which are deposited in various tissues, including the eye. These deposited complexes fix complement and can trigger severe inflammatory reactions.

These reactions in the eye can result in iritis. As opposed to the insidious and almost asymptomatic iritis seen in direct bacillary iris invasion, the hypersensitivity iritis is typical of the acute, painful iritis more frequently encountered by the ophthalmologist. There are the usual symptoms of pain and photophobia accompanied by a reddened eye. The ophthalmologist will see the usual cells, flare, and keratitic precipitates on slitlamp examination of the cornea and anterior chamber.

Another frequent expression of such hypersensitivity reactions is nodular scleritis. The nodules are raised, red, quite tender and may be solitary or multiple. Untreated, the nodules take several weeks to months to resolve spontaneously, leaving a focal area of scleral thinning. With corticosteroid therapy their resolution is generally rapid.

Treatment

The specific treatment of ocular leprosy depends upon its particular expression in the eye. As in all cases of facial nerve paralysis, careful attention must be taken to prevent corneal damage. Frequent lubricants in the form of artificial tears and/or unguents are used. In severe cases of lagophthalmos the various plastic surgery procedures to the lids are utilized in an attempt to protect the corneal surface.

The hypersensitivity reactions such as uveitis and scleritis are treated with anti-inflammatory agents, of which the topical corticosteroids are the mainstay. Occasionally systemic steroids are necessary in severe reactions. In addition, mydriatic-cycloplegic agents such as topical atropine are routinely used to prevent, if possible, the scarring of the iris which produces adhesions of the iris to the lens, and to prevent the scarred, nonreactive, miotic pupil.

The specific chemotherapeutic agents against *M. leprae* are utilized, usually in consultation with the dermatologist managing the general disease. These antimicrobials include Dapsone and Clofazimine (B663). Both these medications are bacteriostatic for *M. leprae*. A third antibiotic, Rifampicin, is bacteriocidal to the bacillus. The development of sulfone-resistant strains of *M. leprae* in the past 15 years has complicated treatment and has spurred the search for new medications or new combinations of the above medications that will be effective against the resistent bacilli.

Conclusion

One can expect that, in Hawaii, most general physicians and dermatologists will have among their patients at least several who have HD. During the ongoing care of these patients, attention should be directed to their eyes. The history and examination should seek to elicit evidence of past and present episodes of unusual ocular inflammation and the presence of weakness of eyelid closure. Any of these findings call for an ophthalmological consultation. The ophthalmologist must be an important member of the therapeutic team for the leprosy patient because the loss of sight combined with the loss of the sensation of touch from leprotic peripheral nerve damage combine to produce a profound disability in these patients.

REFERENCES

1. Hathaway JC: Leprosy in Hawaii. *Hawaii Med. J.* 1970: 29:429-37.
2. Reichert E: Hansen's disease — the problem in Hawaii today. (fact sheet) Hawaii State Dept. of Health.
3. Choyce DP: Diagnosis and Management of Ocular Leprosy. *Brit. J. Ophth.* 1969; 53:217-223.
4. Shields JA, Waring 60, Monte LG: Ocular Findings in Leprosy. *Am. J. Ophth.* 1974; 77:880-890.
5. Trautman JR: Epidemiological aspects of Hansen's disease. *Bull. N.Y. Acan. Med.* 1984; 60:722-31.
6. Binford CH, Meyers WM, Walsh GP: Leprosy. *JAMA* 1982; 247:2283-92.
7. Slem G: Clinical Studies of Ocular Leprosy. *Am. J. Ophth.* 1971; 71:431-434.
8. Schwartz B: Temperature gradients in rabbit eye. Invest. *Ophthal.* 1962: 1:513-21.
9. Michaelson JB, Roth AM, Waring GO: Lepromatous iridocyclitis diagnosed by anterior chamber paracentesis. *Am. J. Ophthal.* 1979; 88:674-79.
10. Ffytche TJ: The eye and leprosy. *Lepr. Rev.* 1981: 52:111-119.
11. Allen JH: The pathology of ocular leprosy II. Miliary lepromas of the iris. *Am. J. Ophthal.* 1966; 61:987-92.
12. Bryceson A, Pfaltzgraff RE: *Leprosy* (2nd Ed.). Churchill Livingstone, N.Y. 1979, pg. 70.

A Clinician's Experience in Managing Patients with Hansen's Disease

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Patients with Hansen's Disease (HD) in Hawaii are now being treated in the private offices of physicians experienced in HD. The Hawaii Hansen's Disease Community Program (HDCP) coordinates ancillary medical services, but there is no "HD Clinic" or central locale for the vast majority of HD victims who are now out-patients. Fourteen years ago we saw our first case of HD, and began accumulating patients as interest and skill in management increased. There are now about 50 patients with HD in our practice. This report includes practical information on making the diagnosis and informing the patient, about controlling reactional states, and about general management of the patient with Hansen's Disease.

Biology

HD is among the most common of infectious maladies, with an estimated 11 million to 15 million cases worldwide. Most cases are found in developing countries such as India, the Philippines, and sub-Saharan Africa. In the United States, most cases are clustered in the endemic areas of New York City, Louisiana, Texas, California and Hawaii. As of October 24, there were 23 new cases in Hawaii in 1987, making a total of about 600 people in the Hawaiian Islands with some form of HD.[1]

Contracting HD requires both exposure to the causative organism, *Mycobacterium leprae,* and an alteration in immune response against the bacillus. Person-to-person contact has been stressed in the past, but recently the possible role of environmental and non-human sources has been raised. These include contaminated water, soil and moss; proposed animal vectors include mites and lice.[2] In cases ascribed to human-to-human contact, the mode of transmission is unclear, but felt to be through inhalation of micro-droplets from nasal secretions of contacts with multibacillary infection, i.e. through sneezing and coughing. Regardless of the source of exposure, after an incubation period of perhaps 2 to 4 years, either no disease develops (most commonly), or one of a spectrum of presentations manifests itself, depending on the patient's resistance (cell-mediated immunity). This is enlarged upon in other articles in this issue.

Making the Diagnosis

The pathognomonic features of HD include skin lesions, cutaneous anesthesia, enlarged nerves, and the presence of acid-fast organisms in biopsies and smears in multibacillary cases. To these should be added the finding of slowed neural conduction. While skin lesions are common, it is not the purpose of this communication to describe in detail the cutaneous findings of HD. Instead, let it be noted that HD lesions have a remarkably variable morphology and are commonly misdiagnosed — even by experienced doctors practicing in endemic areas. For example, tuberculoid HD is manifested by one or two, pale or red, cutaneous patches which are easily mistaken for tinea, eczema, psoriasis, or granuloma annulare. The more common multibacillary patients at the other end of the spectrum can present with unremarkable plaques of red skin without definable edges, perhaps with slight nodularity. These are lepromatous and borderline-lepromatous cases which can easily masquerade as systemic lupus erythematosus, vasculitis, and even the "great imitator": Syphilis. HD patients often present themselves initially to dermatologists, and we remain impressed by the disease's myriad of faces.

From our own embarassing experience, the best way to avoid missing HD is to *biopsy or to have biopsied any skin lesion which is unclear in its nature, or which has atypical features, or which fails to respond to treatment in a reasonable period of time.* This approach applies especially to non-Caucasian and immigrant patients for whom the risk is highest; biopsying also uncovers other disorders unrecognized clinically. Remembering that most lesions are at least partly anesthetic, is helpful, as is the finding of neural hypertrophy. But nothing beats tissue examination in establishing uneqivocally the diagnosis of HD. It is wise to remember that even in areas where HD is common, it is frequently missed.

Breaking the News

Informing someone that they have HD is not easy, but the emotional trauma can be softened. (The word "leprosy" should be avoided by the doctor and staff unless its use is needed to convey the *meaning* of the diagnosis.) It is helpful to explain that HD is an infection of the skin and nerves by a "germ" that is related to the tuberculosis germ. Explaining that, like in tuberculosis, there are medicines effective in killing these germs, will help to emphasize the rationale for antibiotic therapy. Patients find it reassuring to learn that deformity, amputation and blindness are almost always preventable with modern therapy; but along with such succor should also come the news that therapy is long-term, and that frequent follow-up visits are important.

At the time of diagnosis, an examination of the entire skin surface is made under good lighting. Attention should be given to the appearance and the location of skin lesions; eyebrows should be examined for madurosis; breasts are checked for gynecomastia; hands are examined in detail for wasting of musculature; and, the hands and feet are tested for anesthesia.

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Loss of sensation commonly causes calluses and ulcers unnoticed by the patient. We have found photography to be invaluable in documenting the signs of HD, and if needed, they can be used in the future to prove that progress is being made against the visible signs of the disease.

An examination of commonly involved nerves for signs of hypertrophy and tenderness is also done at the time of diagnosis. These nerves invariably include the greater auriculars, ulnars, posterior tibials and superficial peroneals.

Follow-up Visits

Education.

Although HD is a chronic disease, patients cannot be monitored and supported by "quick-check" follow-up visits. The disease requires constant intervention in order to achieve the goal of preventing cutaneous, ophthalmologic and neural damage. It is therefore very important for the patient to become "engaged" early in a program which will involve years, perhaps a lifetime, of therapy.

It has been our purpose to make each follow-up visit an examination *and* an educational experience, because patients who understand as much as they possibly can about the pathophysiology of HD are less likely to become non-compliant. Informed patients also help "flag" problems early, when intervention is feasible. This is so critical in managing HD. The legacy of deformity still remains visible as a warning in the pre-antibiotic era patients present in the community. The Hawaii Hansen's Disease Community Program supplies easily-understood literature for patients to read, but it is helpful if the physician supplements this basic knowledge by oral explanations and by drawings. For example, the Ridley-Joplin arc, which depicts the spectrum of HD, may help clarify why various afflicted family members are taking different medications. Introducing the concept of a poorly-understood, HD-related immunological defect helps relieve guilt. Other important ideas to be explained are the morphologic and bacteriologic indices.

Rendering the patient non-contagious, and controlling reactional states must also be explained in order for therapy to be successful. Of course, the most rewarding feature of education occurs when the knowledgeable patient "teaches" the doctor.

Treatment.

The details of multi-drug treatment have been well described in Dr. Frankel's article in this issue of the JOURNAL, together with a table: *Current HDCP Minimum Therapy Protocols,* to which the reader is referred.

There are well-described side-effects seen with these antibiotics, and the physician who uses them soon learns the list. Rather than concentrating on the litany of potential problems at the time of the follow-up visit, I believe a more useful approach is to ask the patient one critical question *"Are you taking your medications as we discussed at the time of your last visit?"* Often, complaints of stomach trouble (B663), fatigue (rifampin and/or dapsone), and others will be vocalized. In this way, the side effects can be identified and handled appropriately.[4]

When treatment is initiated, it is helpful to actually demonstrate what the various pills and capsules look like. We explain the treatment program carefully so that patients understand how and when to take the prescribed two or three antibiotics. We mention that rifampin should be taken on an empty stomach, but that B663 (clofazamine) is best taken with food to minimize stomach upset. Out of compulsion, we write a daily master timetable showing when the various medications are to be taken during the day.

Laboratory

When unusual laboratory results are obtained it is important to determine if the abnormality is from the therapy, or from the disease. It has been our experience that Hansen's Disease itself produces few physiological changes on routine CBC, chemistry profile and urinalysis. Laboratory data occasionally alert the physician to HD-related problems such as nephritis from reaction states, but most often the laboratory changes are due to effects of antibiotic treatment. For example, dapsone almost always produces at least mild hemolytic anemia, and rifampin can cause eosinophilia; more seriously, it can induce hepatitis, or thrombocytopenia.

For these reasons, we order routine chemistries about twice a month on newly-diagnosed cases, and every 3 months on stable patients. Hepatitis B studies, stool for ova and parasites x 3, and serum testosterone levels in males (for asymptomatic orchitis) can also be justified in the HD patient population. It is also important to get G-6-PD levels before starting dapsone.

Smears

Smears are taken by pinching affected skin to make it taut, and then nicking with a sterile #15 scalpel. The needed skin tissue fluid is collected onto a glass slide, stained for acid-fast organisms, and interpreted by the same technologist every time in order to enhance reproducibility.

The *numbers* of organisms on smears are the "bacteriologic index (BI);" their *appearance* is the "morphologic index (MI)." Results are reported on a logarithmic scale of zero to six. While it is difficult to find even one acid-fast organism on smears from tuberculoid and borderline-tuberculoid patients, the multibacillary cases (lepromatous and borderline-lepromatous) are teeming with bacilli and smears in these cases are important markers for disease activity. Such smears are taken from involved skin sites and serial records are kept. Such records are valuable, since over periods of time they help to evaluate treatment efficacy. With appropriate antibiotic treatment, the BIs and MIs decline to 0, taking about 12 to 18 months. If the BI and MI are *not* dropping over a few months, either the organisms are resistant, or the patient is not taking the medication, or both. Smears give the attending physician information similar to what a diabetologist learns from a glycohemoglobin test.

It has been our practice to inform patients what smears can tell us, and then to perform them about every 4 months until a BI/MI index of 0/0 is reached. Only multibacillary patients need to have smears done. In this way, the patient is aware that progress is being monitored, and that medication delinquency can be recognized. After having been "burned," we remain somewhat cynical about patients' professed compliance with medication regimens, and we are not reluctant to perform smears (and biopsies) when non-compliance is suspected, or whenever there are clinical symptoms suggestive of unexpected disease activity, such as erythema nodosum leprosum reactions.

Reactions

Because reactional states are painful and destructive, controlling them is one of the goals of Hansen's Disease management. Although the mechanisms behind reactional states are only partly understood, a body of knowledge does exist which enables some understanding of pathophysiology and therapy. Often, an untreated patient will present to the physician for the first time with the story that a previously quiescent skin patch had suddenly become swollen, red and hot. This represents a type 1 reaction which is cell mediated and represents a shift in the intrinsic immune response to the *M. leprae* bacillus. Clinical-

ly, type 1 reactions are more easily recognized in borderline cases where they present with cutaneous edema, erythema and ulceration. These acute flare-ups can be very destructive to neutral tissue, and if untreated, can cause permanent and severe deformity such as a facial nerve palsy, or a claw hand from ulnar and median nerve involvement.

The second type of reaction is termed a type 2 reaction, also known as an erythema nodosum leprosum (ENL), felt to be due to circulating immune complexes. It is more common in borderline-lepromatous and lepromatous cases, and is associated with painful red nodules, iritis, scleritis, arthralgias, neuritis, adenopathy, orchitis, tendonitis, sterile abscess, fever, headache, insomnia, and depression.

These reaction types can be confusing and sometimes resemble each other. Generally they can be sorted out clinically or a skin biopsy can clarify the picture, since they differ histologically. Occasionally both reactions occur simultaneously.

Corticosteroids are required for severe reactions of both types, while aspirin will control the less inflammatory processes. Steroids are given in rather high doses since rifampin induces liver enzymes which cut the effective steroid dose in half. Doses of 80-120mg per day are commonly needed, and often must be continued for weeks.

Clofazamine is remarkable in that it is both an antibiotic in HD and also anti-reactional. To be an effective anti-reactional drug however, it must be used in the range of 200-300 mg/day, and results have a delayed onset from one to three weeks. Stomach distress and hyperpigmentation are common side effects of high-dose B663.

Colchicine is among the many drugs reportedly of help in controlling ENL but we have not found it so[6].

Thalidomide is very effective and remarkably safe for the short periods for which it is generally needed. It must not be given to fertile female patients, and sedation is occasionally problematic. It is used in doses of from 100 to 300mg per day in divided doses.

Some reactional states are complex and treacherous. They may require combinations of high-dose steroids, clofazamine, and thalidomide; it is wise to get help from a colleague experienced in such problems when confronting prolonged or aggressive reactional states (see other articles in this issue of the JOURNAL).

Ancillary Physicians

The attending physician commonly relies on other physicians for help in the management of HD, which clearly demands a team effort. The ophthalmologist, physiatrist, endocrinologist, orthopedist, neurologist and hand surgeon can all render valuable supporting advice to the primary physician, who is often a dermatologist.[5]

REFERENCES

1. Morbidity and Mortality Weekly Report. Oct. 30, 1987. Vol. 36, No. 42.
2. Blake LA, West BC, Lary CH, Todd IV JR. Environmental Non-Human Sources of Leprosy. Reviews of Infectious Diseases May-June 1987; 9:562-577.
3. Sreevatsa, Giddhar BK, Desikan KV. Persister M. Leprae After Introductory Rifampin Followed by Dapsone Therapy. Leprosy in India 1981; 53:350-353.
4. Ramanaiah T, Jeyasingh P, Fernandes S. Non-Compliance to Treatment Among Leprosy Patients. Indian Journal of Leprosy 1986; 58:96-106.
5. Sroat DA. Ocular Leprosy in this issue of the Hawaii Medical Journal.
6. Sharma VK, Kumar B, Mohan Singh, Kaur S. Colchicine in the Treatment of Type 2 Lepra Reaction. Indian Journal of Leprosy Jan-Mar 1986; 58:43-47.
7. Bryceson, Anthony and Pfaltzgraff, Roy. Leprosy. 1979. London and New York, 1979.

. . . a case in point

Relapse in Hansen's Disease

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Both Hansen's Disease (HD) relapse and an increasing prevalence of dapsone-resistant M. leprae *are recognized worldwide and have necessitated major changes in HD treatment and control efforts. Hawaii's HD problems are representative of those encountered elsewhere. We physicians remain essential to the task of patient care and interruption of disease transmission. The complexity of social factors involving patients, as well as the complexity of antileprosy drug regimens, are challenges for each of us who are HD caregivers, and for Hawaii's HD control programs.*

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Introduction

The unique social history of Hawaii is to some degree responsible for HD *not* being endemic here today. It has been estimated that in 1880 one in every 100 Hawaii residents had leprosy, and that 92% of the patients were of Hawaiian or part-Hawaiian ethnicity[1,2]. Between 1880 and 1924, the incidence and prevalence rates of HD decreased. This was probably due to the decrease in the Hawaiian population. The immigration of a large number of persons further pushed rates down. If it were not for these events, the situation in HD endemic areas around the world would also exist in Hawaii. The fact that Hawaii still has patients with Hansen's disease presents an opportunity to understand and contribute to the solution of a worldwide problem.

In 1981 the Hansen's Disease Program of the Hawaii State

Health Department undertook an aggressive campaign designed to improve early detection of new and relapsed HD[3]. Special attention was given to the demographics of risk of disease, and in particular to the 350 persons formerly "discharged with quiescent disease," subsequently determined to have a 30% risk of relapse. Targeted practicing physicians, health-education aides, and all state public health nurses received training in HD.

A public health nurse (PHN) from a rural outer-island district (population 9,000) attended a training seminar and then, in late 1982, systematically reviewed her district's HD patient charts. Five patients who were at theoretical risk of disease relapse were identified. Of these five, one had recently committed suicide; prior to his death, he had complications of HD. The second patient could not be located, and the third patient refused any contact. Two patients were interviewed; one had regular contact with her personal physician, and had a progressive peroneal nerve palsy attributed to poorly controlled diabetes. In this case, consultation with an orthopedist experienced in HD led to the diagnosis of relapsed Borderline HD.

The fifth and last patient appeared to have, at the time of the PHN interview, active Lepromatous HD. She did not have a personal physician and was persuaded to visit a designated physician. The following work-up concerns this patient.

Case Report

In February 1983, this 65-year-old woman complained of "going blind." The patient was well until 1962, when she experienced gradual onset of numbness in her left hand and right lower extremity. She remembered no other symptoms. In February 1965, as a family "contact" of a known HD patient, she received a routine screening examination. The symptomatic extremities were anesthetic in areas served by the left ulnar and right peroneal nerves and these nerves were enlarged. Slit-skin smears and biopsy were consistent with "indeterminate" H.D. [The names used to classify the types of HD have changed as more was learned about the disease; what was "indeterminate" in 1963 is now considered to be in the "Borderline" category.] She was then involuntarily taken to Oahu and admitted to Hale Mohalu.

The patient was treated initially with low-dose, intermittent monotherapy with dapsone. By 1967 she was receiving dapsone 50 mg daily, and had no clinical or laboratory evidence of active disease. She was discharged from the hospital with a plan for regular physician visits and to take dapsone 50 mg daily, a practice she followed until 1969. She was not interviewed again until 1974, when a PHN made a home visit. It was noted that she looked well, had no complaints and was working at her usual occupation. She was specifically counseled on the need for periodic medical evaluation and antibiotic therapy to prevent HD reactiviation. The patient, however, declined all urging for further examination or treatment.

The patient stated that she was in excellent health from 1967 to about 1980. She then began to notice subtle skin changes in patches on her extremities, progressing to cover most of her body, with skin thickening and redness, occasionally worsening in certain areas. She experienced low-grade fevers, marked nasal stuffiness, easy fatiguability, myalgia and "shooting pains" of the extremities and weight loss (25 lbs. in three years). The left hand began to "curl up" and stiffen. Her vision, which the patient stated had always been "perfect," began to fail. She stopped most nonessential social activity, as well as driving. She consulted an ophthalmologist, withheld her medical history, and received eye medications which were ineffective. The patient made no effort to seek help for what she suspected to be active, progressive HD. She acknowledged a fear that she might again be forcibly relocated, and felt that living with her illness was preferable to living without her family.

The patient's uncle and her spouse both had lepromatous HD, the latter diagnosed in 1960, after they had been married for 10 years. He was involuntarily taken to Oahu and from there to Kalaupapa. Soon thereafter they were divorced. Their youngest child was diagnosed as having tuberculoid HD in 1959.

The review of systems was unremarkable except for chronic sinus congestion and palpitations.

On physical examination the patient was poorly groomed, wearing oversized clothes, sunglasses and a wide-brim hat. Her voice was hoarse but soft, and she was initially suspicious. She was thin, with normal body temperature and respirations; the blood pressure was 130/80 and the pulse irregularly irregular at 78/minute. Facial skin was thickened and waxy in appearance; ear lobes were slightly enlarged. Lateral madarosis, right lower lid ectropion and lagophthalmos were noted; she had adequate tearing, infrequent blinking, conjunctivitis, bilateral corneal scars and cataracts. Corneal sensation was absent. She was able to count fingers at 15 inches OD, 20 inches OS. Slit-lamp exam later showed multiple changes consistent with HD. Nasal structure was intact; multiple dental caries and gingivitis were noted.

The lungs were clear. A grade I/VI systolic murmur was present; pulses were strong and equal bilaterally. Atrial firbrillation and PVCs were noted on the electrocardiogram. The liver edge was palpable at the costal margin; the spleen was nonpalpable. Mild lymphadenopathy was noted in the left axilla.

The left upper extremity was anesthetic up to the elbow, with guttering of the interosseous spaces and a flat thenar and hypothenar eminence, and a "claw" hand deformity pattern. Scattered small burns and abrasions were present. Ulnar and median nerves were palpable, enlarged and nontender. Sensation was decreased in the right hand. The feet were swollen. Decreased or absent sensation was noted below the knees bilaterally; peroneal nerves were palpable but there was no foot-drop or muscle weakness.

The skin showed diffuse changes with no well-circumscribed lesions. Many erythematous, infiltrated papular lesions of varying size were present, with decreased sensation, most notable over the thorax. Eight to twelve areas of atrophic-appearing wrinkled skin were noted, measuring no greater than 7x10 cm on the left forearm and right lower extremity.

The white blood count was 11,400, with 59 polys, 3 bands, 31 lymphs, 6 monos, 1 eos. Hemoglobin was 13.7 g/dl, hematocrit 40.2%, MCV 80, MCH 29.3, MCHC 34.10. Traces of protein and occasional RBC were seen in the urine. Serum cholesterol was 106, and total protein 8.5 (normal = 6.5-8 nml). Other routine laboratory tests were unremarkable.

Slit-skin smears showed a BI of 4.5, MI of 2-3. A skin biopsy of the right brow revealed granulomatous infiltration of the dermis by histiocytes having granular and edematous cytoplasm, with mild epitheloid cell-differentiation. A well-defined subepidermal grenz zone was present; nerves were not identifiable. Numerous organisms with prominent clumping were seen on acid-fast stained sections; bacilli stained well and appeared to be predominantly solid.

The primary diagnosis was relapsed, lepromatous Hansen's Disease.

Course of Illness 1983-1987

From 1983-1985, an attempt to educate the patient regarding her illness, its natural history, relapse, transmission, expected course of treatment and complications was carried out at the initial visit, and reinforced at each subsequent visit. At no time

did the patient agree to discuss her current family situation or contacts. Dual drug therapy was mutually agreed upon, beginning with a plan of rifampin 600 mg daily and clofazamine 100 mg tid, tapering off to 100 mg daily after 3 months. The latter was given with the intent of preventing or minimizing reactions. For the next 24 months the patient presented herself regularly at monthly intervals. She was also treated for atrial fibrillation and for episodic minor illnesses. The patient did well for the first year, with a 15 lb weight gain and a decrease in BIs and MIs on slit-skin smears. The ophthalmologist, who became aware of the diagnosis and consulted an appropriate specialist, examined the patient monthly.

Early in the second year of treatment, the patient underwent a right extracapsular cataract extraction without complications. In mid-year a routine CBC showed a hgb of 10.4 and a platelet count of 840,000. No etiology for the anemia or the thrombocytosis was determined and bone marrow examination was normal. Treatment consisted of high-dose aspirin. The platelet count and hemoglobin returned to normal over the next 6 months.

The patient's eyes worsened. Acute and then chronic uveitis was diagnosed. It was thought to represent an immunologic reaction. The only certain side-effect from medication was intense pigmentation of the patient's skin, and dryness and scaling of the skin of her lower extremities. The patient's total care was reviewed periodically with consultant physicians who had experience with HD.

At the end of the second year of treatment, the patient visited with a group of former HD patients whom she had known years previously at Hale Mohalu, and discussed her condition and medications with them. These former patients told her that "clofazamine causes blindness." The patient was impressed with this; she refused all further medication, except for dapsone, which she took in low doses several times a week. She refused further contact with the treating physician, and was hostile and abusive to the public health nursing staff attempting telephone follow-up.

The patient consulted an attorney with the intent of bringing suit against the treating physician, whom she held responsible for "blindness caused by experimental medicine." She was subsequently hospitalized, and her vision improved after a canthoplasty and daily eye care. Resumption of antileprosy drugs was advised. Slit-skin smears showed MIs of zero. The patient dropped the threat of lawsuit, but was lost to follow-up.

Two years later, in mid-1987, the patient presented herself to another physician with a complaint of right lower extremity pain of two months' duration, stating that she was receiving medical care from a general practitioner, and that current medications were dapsone 25 mg three times a week, verapamil 120 mg as needed for rapid heart beat, digoxin 0.25 mg daily, ferrous sulfate daily and ibuprofen prn. The HD history was obtained and an examination was performed. An additional recent history of recurrent crops of skin lesions that would resolve over a few days was obtained. Multiple, erythematous, 1-3 cm plaque-like skin lesions with ill-defined margins were present. The lesions were more common on the extremities and the lesions on the thorax and abdomen appeared confluent. The cause of the leg pain was not evident after examination of the low back and right lower extremity. The WBC was 34,000 with 80 segs, 9 bands, 6 lymphs and 5 monos. Hgb was 12.0, Hct 37.5 and platelets were elevated at 519,000/mm^3. Urinalysis was negative except for 30-50 RBC/hpf. Serum albumin was low (3.2 gm/dl); alkaline phosphatase and LDH were elevated (180 U/1 and 288 U/1 respectively). Skin biopsy was consistent with lepromatous HD, with ENL reaction. Acid-fast stained sections were negative.

The patient agreed to follow up with this second physician, who planned a conference with consultants from the Hansen's Disease Program of the Hawaii State Health Department.

Case Discussion

The case history of this patient is replete with the problems and frustrations experienced by HD patients and treatment programs worldwide. It emphasizes the need for individualized attention to the patient and unremitting awareness of the public health.

The natural course of this patient's infection was interrupted by dapsone, only to recur and progress. She was originally treated, 22 years ago, with a fair assumption that the disease could be controlled. Most patients today are still treated with this assurance from their physicians.

In addition to the stigma and fear that have historically been associated with leprosy, many older patients have had further social disruption caused by forced segregation. The impact of losing her husband in the manner in which it occurred, and the eventual separation from the rest of her family, could all by itself account for this patient's anger, distrust and withdrawal. With the repeal of segregation policies, and the use of sulfones, many of the social consequences endured by this person's generation of HD patients have been eliminated. Lepromatous disease does not naturally go into remission. Dapsone *did* spare this patient years of inflammatory reactions, infectious status, additional social chaos and probably an early death.

The physical complications of the disease are severe. For both the patient's and the physician's sake, their prevention is the ultimate goal. If the patient is alienated from the health care system, or if health care is inaccessible for other reasons and complications go untreated, then what chance can there be of interrupting contagion? The incomplete history obtained as to the subject patient's current living situation is cause for concern. When relapse was diagnosed, her contacts had already been at risk for having become infected.

Relapse can be a tragedy for the patient as well as a loss of control of disease transmission within the community. Hansen's disease, as a public health problem, cannot be resolved unless disease relapse is prevented.

A Review of Relapse in HD

Relapse can be defined as the reappearance of clinical and laboratory evidence of a quiescent disease or a disease previously in remission. Soon after the sulfones became available, relapses in patients with the lepromatous forms of HD were frequently recognized, usually years after the cessation of therapy[4,5].

An early report of a group of Carville patients who relapsed while still on therapy was ominous[6]. These patients had initial clinical response to sulfone medications and absence of bacteria on examination of slit-skin smears. Years later, however, still on continuous therapy, they had clinical exacerbations and positive slit-skin smears. Patients treated with low-dose, intermittent sulfone monotherapy have been noted to have high relapse rates [7,8].

In Hawaii, patients diagnosed, hospitalized (i.e. treated) and discharged [Criteria for discharge included at least three successive, periodic slit-skin smears that are negative for bacteria] between 1946 and 1968, already had a relapse rate of 23%[2].

Non-compliance with therapy is an obvious cause of disease relapse. Prolonged periods of treatment given to asymptomatic patients, those not likely to suffer withdrawal symptoms if the

drug is discontinued, do not make for good compliance when the treatment settings are unsupervised. Of course, there are many other factors involved in failure of the patient to take medication. The importance of repetitive and persistent education, as a function of good patient/provider rapport, cannot be over-emphasized.

Re-infection with *M. leprae* is very difficult to prove, but it may possibly account for recurrence of disease, in endemic areas.

Premature discontinuance of therapy after apparent disease arrest, on the part of both doctors and patients, has historically been widely practiced and is a major cause for disease reactivation. There is still insufficient epidemiologic data to determine the duration of dapsone monotherapy necessary to prevent relapse. Most experts now recommend lifetime treatment for multibacillary disease.

The mechanism of relapse, after cessation of therapy was suspected by many, including Arnold[10], was demonstrated in 1974 by Waters and colleagues[11], who found "persistent, viable bacilli" sequestered in skin, nerve and muscle tissue of multibacillary patients with arrested disease. These "persisters" remain viable despite full-dose, continuous dapsone therapy. When therapy is stopped, multiplication and spread of these bacilli cause relapse. Microbial persistence of this type is analagous to that which occurs in subacute bacterial endocarditis and tuberculosis.

Natural, drug-resistant mutant strains can exist in "wild" bacterial populations. After antibiotics are administered, selection and promotion of mutant strains are more likely to occur in chronic infections, where a "quick kill" is not possible. The degree and frequency of resistance may also vary with the size of the bacterial population, making lepromatous leprosy a prime candidate for acquired resistance. Theoretically, in multibacillary forms of HD treated with dapsone, drug-sensitive strains die out but the resistant strains survive, multiply and eventually replace them. Thus relapse occurs. This would explain why those early patients at Carville had exacerbations while on continuous therapy. Epidemiologic studies had also pointed toward acquired drug-resistance as a cause of relapse.

It was not until after the mouse foot-pad technique[12] had been developed by Sheppard, that the existence of dapsone-resistant *M. leprae* was finally proven[13]. Resistance to dapsone appears to develop in a step-wise manner.

Internationally as well as in Hawaii[10,14], low-dose, intermittent, monotherapy protocols were in general use from 1965 through 1979. Irregular treatment was sometimes the result of patient non-compliance, but physicians also frequently prescribed cessation of therapy during reactions (which could last for months or years) because these reactions were thought to be precipitated by the treatment, rather than the disease.

The World Health Organization's 1977 assessment[15] that dapsone resistance was related to the manner in which it was being prescribed was fully supported by modern concepts of infectious disease, as well as unequivocal epidemiologic data. WHO recognized that the increasing prevalence of acquired dapsone-resistance had become a "significant problem" since 1966, when there was thought to be a low, 0.2%, prevalence rate. As the number of patients with acquired drug-resistance increased, the risk that they would become the source for new patients showing primary drug-resistance, also increased. This risk was realized in the same year as the WHO report, when the first cases of primary dapsone-resistant disease were identified[16].

Hansen's disease that is resistant to most other antileprosy drugs, including rifampin and clofazimine, is also known to occur.[17,18] Prevention of increased resistance rates for these



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INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene)

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.

2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml

3. Correction of acidosis, if present, with intravenous sodium bicarbonate

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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alternatives to dapsone is of crucial importance.

Unexpectedly high prevalence rates of primary dapsone resistance and rapidly increasing rates of acquired resistance (30% prevalence in some areas) were acknowledged by a WHO Study Group in 1982[19]. Unless drug resistance could be managed, the expert Study Group argued, the effectiveness of HD control programs would deteriorate worldwide, the incidence of resistant disease would spiral upward, multidrug resistance would develop and a catastrophic public health disaster would be unavoidable. The opportunity for pharmacologic control of HD could be lost forever. The Study Group then designed a new multi-drug treatment protocol in an attempt to solve these problems by means of careful consideration of five key factors: Cost and length of therapy, noncommunicable status of paucibacillary HD, inability to test each patient for dapsone-resistant disease, and the necessity of limiting patient supervision during treatment.

Natural mutants resistant to one drug should be fully susceptible to another; therefore, with multi-drug therapy the risk of developing resistant disease becomes extremely low. Rifampin is bactericidal and has "quick-kill" ability, but it is costly, and in most areas where HD is endemic, its cost is prohibitive. Lack of supervision and high cost are the reasons why rifampin is given only once a month in most international programs. Fortunately, cost is not a limiting factor in Hawaii. "Short-course" therapy trials take into account the record of even the best programs, including Hawaii's, to lose patients in follow-up. This has probably been the major cause of failure for HD treatment and control programs.

Paucibacillary disease is minimally communicable, as Worth and Hirschy[20] convincingly demonstrated, so patients should be treated and released expeditiously, allowing HD-control staff to concentrate on multibacillary cases.

Finally, sulfone-resistant disease can be proven only by the mouse foot-pad technique, or by long supervised clinical trials, both of which are generally unavailable except in America.

Will these or similar multidrug, short-course treatment protocols solve the problems of drug resistance and disease relapse? We will not know until results of international trials of these treatment regimens are available.

Epilogue

In addition to the case presented here, Hawaii's Hansen's Disease Program returned four former patients (with complications, relapse or risk of relapse) to the State "HD register" for treatment and monitoring in 1983; this was also the average number of patients reinstated for each of the previous 10 years. In 1984, however, 58 formerly diagnosed patients were returned to the register[21]. This was the result of the Program's successful campaign to re-evaluate the 350 patients identified in 1981 as "at risk for relapse"[22]. Approximately half of these were still living in Hawaii, and assumed to have a relapse risk of 30%. Therefore the accomplishment of re-evaluating and re-registering 58 patients speaks highly for our local HD Program's management and staff. It is also a reminder that control of this disease depends on personalized attention to each patient.

REFERENCES

1. Hirschy ID: 100 Years at Kalaupapa. *Hawaii Health Messenger,* Vol. 20, No. 2, 2965.

2. Gould KL, Leprosy and Public Health in Hawaii — Changing a Policy of Isolation. *Hawaii Medical Journal,* 28, 5 May-June 1969.

3. *Narrative Annual Report 1981-82,* Hawaii State Health Department, p. 9.

4. Erickson PT, Relapse rates following apparent arrest of leprosy. *Int. J. Lepr.* 19 (1951) 63-66.

5. Rodgriguez JN (1958) Relapses after sulphone therapy in leprosy of the lepromatous type. 7th International Congress of Leprology, Tokyo. p. 233.
6. Wolcott RR, Ross H, Exacerbation of leprosy during present day treatment. *Int. J. Lepr.* 21, 4 (1953) 437-439.
7. Noordeen SK, Relapse in lepromatous leprosy. *Lepr. Rev.* 42 (1971) 43-48.
8. Touw-Langendijk EMJ, and Naafs B, Relapses in leprosy after release from control. *Lepr. Rev.* 50 (1979) 123-128.
9. Almeida JG, Jesudasan K, Christian M, Chacko CJG. Relapse rates in lepromatous leprosy according to treatment regularity *Int. J. Lepr.* 1986, 54, 16-20.
10. Arnold HL, Fasal P, Leprosy, diagnosis and management. C.C. Thomas Publisher, Springfield, Il 1973.
11. Waters MFR, Rees RJW, McDougall AX, Weddell AGM, 1974. Ten years of dapsone in lepromatous leprosy: clinical, bacteriological and histological assessment of finding of viable leprosy bacilli. *Lep. Rev.* 45, 288-298.
12. Sheppard CC, Acid-fast bacilli in nasal secretions in leprosy, and results of inoculation of mice. *Amer. J. Hyg.* 1960: 71: 147-157.
13. Pettit JH, Rees RJ, Sulphone resistance in leprosy. An experimental and clinical study. *Lancet* 1964; 2:673-4.
14. Hathaway JC, Leprosy in Hawaii. *Hawaii Medical Journal,* Vol. 29, No. 6, July-August 1970, p. 429-437.
15. Expert Committee on Leprosy. Fifth report. Geneva: World Health Organization, 1977; *Tech. Rep. Series* 607.
16. Pearson JMH, Haile GS, Rees RJW. Primary Dapsone-resistant leprosy. *Leprosy Review* 1977; 58:129-132.
17. Jacobson RR, Hastings RC. Rifampin-resistant leprosy. *Lancet* 1976; 2:1304-1304.
18. Warndorff-Van Diepen T. Clofamimine-resistant leprosy. *Int. J. Lepr.* 1982; 50:139-142.
19. World Health Organization Study Group. Chemotherapy of leprosy for control programmes. Geneva: World Health Organization, 1982; *Tech. Rep. Series* 675.
20. Worth RM, Hirschy ID, A test of the infectivity of tuberculoid leprosy patients. *Hawaii Medical Journal,* 1964, Vol. 24, No. 2, Nov.-Dec., 116-119,
21. Statistical Reports, Department of Health, State of Hawaii, 1972-1985.
22. Narrative Annual Report 1983-84, Hawaii State Health Department, p. 9.

. . . the true meaning of Aloha

Challenging the Stigma: Hawaii's Role in Dispelling the Myths of Leprosy*

Anwei Skinsnes Law MPH**

Health of mind and body is so fundamental to the good life that if we believe that men have any personal rights at all, as human beings, then they have an absolute right to such a measure of good health as society and society alone is able to give them.
—Aristotle, c. 300 B.C.

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* Hansen's Disease is the official term for the disease in Hawaii. However, when one discusses history or the stigma, one has to use the term leprosy. When dealing with individuals, it is important to be sensitive to their personal preferences regarding terminology.

** Ms. Law is a historian who has extensively researched the history of leprosy and its impact on society in Hawaii. Address reprint requests or correspondence to Ms. Law: Kalaupapa, Hawaii 96742

The quotes in "side bars" throughout this article are from interviews and public statements made by Hansen's Disease patients in Hawaii; they were collected by the author, Anwei Skinsnes Law. She has titled them "The Wisdom of Experience."

The concept that good health involves more than mere physical well-being is timeless and timely. Good health requires mental well-being and social well-being. It involves expressing one's individuality while at the same time feeling a oneness with society and the rest of the human race. Too often, however, a physical condition robs one of that individuality, independence and sense of community. This is especially true when that illness or condition carries with it a powerful stigma, a stigma which is imposed on the individual by society.

Nothing, perhaps, has carried with it a greater stigma than leprosy. From time immemorial, the person with leprosy has all too often been regarded as the ultimate outcast. The totally unacceptable term "leper" is commonly used to describe anyone who has lost their place in society, whether due to disease or some supposed "moral delinquency." The advent of AIDS has

given witness to repeated comparisons between the social reaction to the two diseases, comparisons that go so far as to label persons with AIDS the "lepers of today." Such comparisons only serve to perpetuate the stigma associated with each disease and increase the burden placed upon those affected. No one should be called a "leper" and turned into an outcast simply because he has a disease or a debilitating condition that the public is afraid of, or does not understand.

ON BEING CALLED A "LEPER": "My skin crawls. My spine tingles all the way up to the back of my hairline . . . I wrote a journal . . . because I want people to know what I feel, what I felt, how I felt when I became a patient, how I felt during my time as a patient, what was done to me, how much I struggled, fighting the disease, fighting bureaucrats, and trying not to be a statistic, trying to be a person."

—Olivia Breitha, Kalaupapa resident

Hawaii has an important role to play in generating an understanding of the complex relationship between leprosy and society's response to it, as well as the long-term effects of stigma on individuals. This stems from the fact that leprosy has been intertwined with Hawaii's history and has touched virtually every family whose roots go back two or three generations in the Islands. Hawaii, therefore, provides a unique opportunity to interpret the effects of a chronic disease on a society over a period of about 150 years in a geographically small but culturally diverse area. The lessons learned from Hawaii's experience with leprosy are universal and timely, as society comes face to face with a new disease that carries with it its own powerful stigma.

ON ACCEPTANCE: "It's a great feeling to know that you can come into one of those places that you were never allowed. I don't ask the reason, I just like the change. I think if there's any reason for this thing opening up, it's only because we've had people who have become more understanding and they become more likable because they don't have the fear that people once had about 'leprosy' and they can accept you for what you *are* not what you *have*."

—Henry Nalaielua, Kalaupapa resident

The History[1]

In the mid-19th century, Hawaii was faced with a major health crisis as diseases introduced to the islands took a drastic toll on the native Hawaiian population. One of the most devastating of these was leprosy, not simply because of the numbers affected but because of the social response it elicited. The Hawaiians themselves were not afraid of the disease and sought to keep the afflicted close to home. The physicians and the Board of Health, however, felt defenseless against the disease; isolation of the afflicted was deemed necessary in order to protect the general public. Hawaii's official response to leprosy was by no means unique. When one studies the history of the social reaction to leprosy in Eastern and Western cultures, certain common attitudes are apparent. Characteristics of leprosy and reactions to it are described in Chinese literature as early as 500-300 B.C.[2]. In China, as in the West, persons with leprosy were considered "morally delinquent" and sent off to live in caves or other isolated places. In Europe, Biblical references to leprosy, coupled with the fact that the disease baffled medical men for centuries, laid the foundation for the treatment of those afflicted with this disease through the ages, treatment that has traditionally been harsh and inhuman.

The fact that leprosy was regarded as a "sickness of the soul" and a punishment for moral wrongdoing resulted in the formation of a bond between leprosy and the church. During the Middle Ages, as leprosy spread rapidly throughout Europe, the church was the only authority that attempted to do anything about it. Harsh restrictions were designed to protect the public; and management of the afflicted was transferred from the medical profession to the religious community. A symbolic funeral was often held, after which the person with leprosy was carried to a hovel where he was to live unvisited and unattended until death claimed him[3].

For all practical purposes, the person with leprosy was dead to the world. He no longer had the rights to which everyone is entitled, including the right to live with family and friends and be part of the community. He was forced to move from place to place, going wherever society, its doctors, its lawmakers and its religious men decreed. Such was the fate of one suffering from leprosy in Medieval Europe and also the fate of one suffering from this disease in Hawaii in the 19th and early 20th centuries.

ON PITY: "If you feel pity enough to give me $50,000 or more, I'll accept it. But seriously, I don't know of any one of our people who want to be pitied. And not only those of us that have Hansen's Disease. Other people who have disabilities, pity is not what they want. They want understanding . . . and to be treated like anybody else. That is the bottom line. Acceptance as a brother or a sister, as part of the community. . . ."

—Bernard Punikaia, Kalaupapa resident now living in Honolulu

Historically, treatment of persons with leprosy has involved policies that sacrifice individual rights in favor of "society's rights." Indeed, Hawaii's first official action with regard to leprosy, "An Act to Prevent the Spread of Leprosy," was signed into law in 1865 and authorized the setting apart of land for the purpose of isolating any person who might spread the disease, if left "at large." This act also stated that it was the duty of police officers and the Marshal of the Hawaiian Islands and his deputies to assist in conveying persons "arrested" as leprosy "suspects" to any place directed by the Board of Health for examination, treatment or isolation[4]. The Kalihi Hospital in Honolulu was built primarily for examination, treatment and initial isolation. A Settlement at Kalawao on the island of Molokai was established for the ultimate and complete isolation of all those determined to have the disease. In effect, the "Act to Prevent the Spread of Leprosy" authorized the forcible separation of individuals from their families in order that society might be protected.

On April 5,1873, the *Pacific Commercial Advertiser* discussed the segregation policies and asked its readers: "Shall not, rather the safety of the many be considered as far outweighing the feelings of the few?" Two months later, on June 14, 1873, the same newspaper published a report of resolutions adopted at an extremely emotional meeting of the Hawaiian Evangelical Association, in which they proclaimed that anyone with leprosy who clung to his family and resisted being isolated was "sinning against the lives of men and against the law of God."

In 1893, public panic with regard to the disease and individual resistance to isolation were at a peak. Twenty-four soldiers were dispatched to the island of Kauai, where a group of persons with

leprosy had segregated themselves in remote Kalalau Valley. The most famous of these, Koolau, resisted "apprehension" when he learned his wife would not be allowed to accompany him to Molokai as a *kokua* (helper). He was branded a murderer and an outlaw and, despite repeated attempts by the soliders to capture or even kill him, Koolau wandered freely in the valley until his death three years later. Military action against this deeply religious individual who had, in effect, isolated himself, was carried out on the premise that society had to be protected at all costs.

ON LEAVING KALAUPAPA: "I think when I decided to leave, I think psychologically I was prepared that I never look back . . . everything was like opening a Christmas package because everything was new . . . When I first was out, especially with those who had family [at Kalaupapa], they tend to kind of don't broadcast [it] . . . But I notice it's changed within recent years. I guess because all what's happening with Hale Mohalu and the movement that Bernard and the others have started that people can shout from across the street now and tell me, 'Hey, you know so and so? Oh, that's my grandmother.' . . . So, I think the mentality has changed a lot. And it makes it all the easier for me . . . Now I look back and all the things that I anticipated, the steps that I took in trying to make things more comfortable for myself, now it's all coming true. I realized that if I told people where I came from first, then I didn't have to worry. At least they knew."

—Elroy Malo, Kalaupapa resident now living in Honolulu

The same fear of the disease resulted in the erection of physical barriers between patients and non-patients at the Kalaupapa Settlement in the early 20th century. Fences separated visitors from patients at the visitors' quarters, rows of potted plants separated patients from non-patients on the dance floor and rules and regulations separated patients from non-patients after working hours. Although some of the physical barriers were removed in the late 1940s, many of the psychological barriers brought about by outdated medical rules and regulations persisted into the 1950s, '60s, '70s and even 1980s.

Mail leaving Kalaupapa was fumigated well into the 1960s although it was generally recognized that fumigation did no good. It was done to make the public feel safe, with little regard for how it made the patients feel. Long after the sulfone drugs had freed their bodies of viable bacilli, the rules and regulations persisted, always reminding the people of Kalaupapa of what they had had and making them feel less than human. Olivia Breitha, a Kalaupapa resident since 1937, remembers that there was a time when she felt that a dog was better than she, because non-patients were allowed to touch the dog but could not touch her. She admits that even now, 41 years after the advent of the sulfone drugs to cure the disease and 18 years after the abolition of the isolation policies, she still feels like "damaged goods."

ON CHANGE: "I'm for changes that make me feel human. I don't want to feel like a patient the rest of my life."

—Olivia Breitha, Kalaupapa resident

If the history of leprosy in Hawaii and Kalaupapa teaches us anything, it should be that, before making any medical policy decisions, we must consider the long-term social effects that will persist long after the disease itself is no longer a problem.

The Challenge

It is generally acknowledged that the stigma alone is the biggest barrier to eradication of leprosy worldwide, yet very little has been done to try and combat it. Papers presented at leprosy conferences invariably refer to the effect of the stigma on treatment and control, but rarely are any solutions proposed for eliminating it. It seems to be generally assumed that the stigma is unavoidable. This situation was discussed by Dr. N.H. Antia of Bombay at China's First International Leprosy Symposium: "While everyone pays lip-sympathy to the stigma which affects all aspects of leprosy and its control, from recruitment of doctors to early detection, regularity of treatment and rehabilitation, little has been done about it as seen by the absence of involvement of social scientists and above all the people themselves."[5]

Hawaii's history provides us with a unique opportunity to challenge the stigma of leprosy, for it is filled with individuals who refused to accept the stigma as part of the disease. Not surprisingly, it is these individuals and their actions that make our society proud of them. We do not respect those who proclaimed that society must be protected at any cost, but rather tender it to Father Damien and others who knew that if society was to survive, it had to be caring of each of its members. While others concentrated on what should be done to ensure the "welfare" of society, Father Damien focused on what *had* to be done for the individual who had been taken away from his family in order to protect society. Similarly, we admire Mother Marianne, who taught that a "quality of life spirit" was essential, especially for persons who faced death imminently. Her philosophy of personal dignity in the face of death came almost a century before its adoption as the cornerstone of the Hospice movement and other efforts aimed at encouraging a person truly to live until he dies.

ON FATHER DAMIEN: "Damien always used Hawaiian only so he was accepted because he was a simple man. That's all he was. Damien was more down-to-earth . . . Damien proved himself by just putting on the hands, the touching of the hands, I think. I've heard the old timers say that, just the touching . . . he was one that would put his arm around them and if somebody was too sick, he could carry them and he got close to them . . . he was more human."

—Richard Marks, Kalaupapa resident

Father Damien and Mother Marianne felt that each individual was important and deserved quality care, as did John D. McVeigh and Dr. William Goodhue, superintendent and resident physician at the Kalaupapa Settlement from 1902-1925 respectively. These two men strongly believed that each person deserved to live a full and happy life, and that isolation did not justify neglect. Embodied in their philosophy was a respect for human dignity and a realization that good morale, coupled with a few minor surgical procedures, could not only prolong a person's life but make that life worth living.

As we look back at history, our respect is not for the citizen groups that fought hard to keep leprosy hospitals out of their communities. Rather, we focus our attention on men like former Governor Lawrence Judd, who fought equally hard to provide patients with an opportunity to regain their place in the community and literally tore down many of the physical barriers between patients and non-patients at the Kalaupapa Settlement.

(Continued on page 80)

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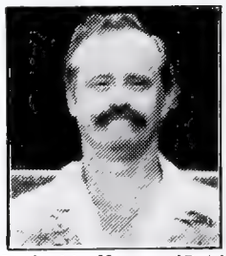
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STIGMA *(Continued from page 77)*

As Hawaii challenges the stigma, it is armed with this powerful history but, even more important, Hawaii is fortunate to have persons with the disease who are willing to speak out in an attempt to dispel the myths associated with it. These individuals can well articulate what it is like to lose one's identity to a disease and struggle for years to regain the sense of dignity and self-worth that was crushed by years of isolation and institutionalization. By speaking out as individuals, they shatter images of old stereotypes and illustrate that, although united by a common bond — the disease itself — their needs and personalities vary widely.

ON HALE MOHALU AND DIGNITY: ". . . [Hale Mohalu] symbolizes hope for the future. It symbolizes a quest for dignity, respect, a recognition of our humanity, or a reaffirmation of our humanity by State authorities."

"I want the State government to realize something very basic about us leprosy patients. They must realize that we have minds, we think, we love, we hate, we cry . . . we rejoice. We have all the emotions and intellect of any person in society. And as such, to recognize that we are human, and thus extend to us the dignity that we are entitled to. It's not that we are granted dignity. Hey, this is something that everyone is born with. This is inherent in man's life, that he be accorded dignity. Not because he is some high official, a government figure who automatically acquires dignity, but because he is a person!"

—Bernard Punikaia, Bloombaum & Gugelyk,
Ma'i Hooka'awale. The Separating Sickness.
University of Hawaii Press, 1979

The best means with which to battle against the stigma are the individuals who are affected by it. Their involvement in education of the public enables us to deal with the disease in terms of individuals rather than statistics. By expressing the human side of the disease, they help us to "put a face on it" which serves to bring it closer to home. They show us the importance of making a distinction between the disease and the person and help us to understand that it is the disease that is fearsome, not the person who has it. If we are able to separate the person from the disease, we will never have to regard anyone as a hopeless case, because even though we may not always be able to treat the disease, we can always treat the person.

ON DISABILITY: "Physical impairment, whatever form it takes, can be devastating. Loss of an eye or eyesight, toes, fingers or limbs, is always total. We are a whole person and replacements to the body are artificial. We are thus limited, even after therapy."

—Henry Nalaielua, Kalaupapa resident

In an important comparison, it is interesting to note how well Hawaii is handling the AIDS crisis. This was exemplified at The 1987 Hawaii Prevention Conference on AIDS held in Honolulu on October 15 and 16, 1987. There seemed to be a feeling that we want to "do it right this time." The challenge to "do it right" goes hand in hand with the challenge to fight the stigma — not only the stigma of leprosy but the unfair stigma associated with any disease or misunderstood condition.

ON FACING THE PUBLIC: "I left Kalaupapa in 1965 seeking my life away from Kalaupapa . . . Now, in fighting the stigma in my case, my supportive family was the biggest help for me. And, I suppose I was like a bull in a china shop. I didn't care. I just bulled my way through and I didn't care what people were saying or doing to me or for me or behind of me or in the front of me. My attitude was, hey, if I can't make it with you, be friends or socialize or work, there's always someone else."

—William Malo, former Kalaupapa resident now living on Maui

Hawaii's inspiring history not only gives us the opportunity to challenge the stigma but it also gives us the responsibility to do so. How can we afford not to try, when much of the world still treats leprosy as it was treated in Hawaii a hundred years ago? How can we afford not to try when only last year a clinic in California bowed to public pressure and refused to treat persons with leprosy even though there was clearly no public health danger?[6] Our history points out the danger and the cruelty of misguided public panic. It shows us the tragic long-term effects of a stigma that has been applied to undeserving members of our community. And, it shows us the wisdom of refusing to accept automatically the stigma as part of the disease. With our history to guide us, and those who have suffered the effects of the stigma to help us, how can we possibly leave the stigma unchallenged?

Summary

Hawaii has a unique opportunity to challenge the age-old stigma associated with leprosy. In addition to its educational and inspiring history, Hawaii has many persons with the disease who are willing to share their experiences in order to promote a better understanding of the disease and society's treatment of them, both past and present. One of the most important lessons to be learned from this history and these individuals is that prior to making any medical decisions, one must carefully consider the long-term social effects of those decisions that will persist after the disease is no longer a problem medically.

REFERENCES

1. Infomation on the history of leprosy in Hawaii has been compiled from original research performed by Anwei Skinsnes Law for the preparation of her manuscript: *A Land Set Apart. Leprosy's Impact on Hawaii and Its Significance for the World.* This information is from a variety of original sources including Board of Health correspondence, reports and other documents located in the Hawaii State Archives and other archival collections.
2. Skinsnes, Olaf K "Leprosy in Society. II. The Pattern of Concept and Reaction to Leprosy in Oriental Antiquity." *Leprosy Review,* Vol. 35 (1964) 106-122.
3. Mouritz, A *A Brief World History of the Destroyer.* Published by the author in Honolulu, 1943.
4. Mouritz, AA St. M. *The Path of the Destroyer.* Honolulu: Honolulu Star-Bulletin Press, 1916, pp. 33-35.
5. Antia, NH "Leprosy Control by a People's Program." Paper presented at China's First International Leprosy Symposium, Guangzhou, People's Republic of China, November 26-28, 1985. Paper published with Dr. Antia's permission in HUI HOA ALOHA newsletter, Vol. 1, No. 3, Oct.-Dec. 1985.
6. "Opposition Kills Plan to Establish Alviso Leprosy Clinic." *San Francisco Chronicle,* May 29, 1987. Related articles: "Fear of Leprosy Patients Stirs Protest." *San Francisco Chronicle,* April 27, 1987; "Fears Are Raised Over Leprosy Plan." *New York Times,* May 4, 1987.



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Kalaupapa As Part of the National Park System

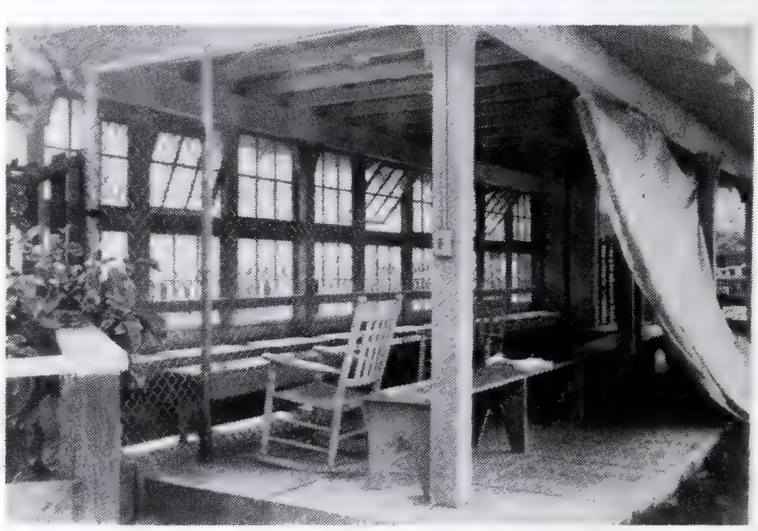
Henry G. Law*

Kalaupapa National Historical Park was established on December 22, 1980. Still in its formative years, Kalaupapa National Historical Park is dedicated to the past, the present, and the future. It is dedicated to preserving the memories and experiences of the past in order that valuable lessons might be learned from them. It is dedicated to providing a well maintained community to ensure that the present residents of the Kalaupapa Settlement may live out their lives in this, their home. And, it is dedicated to the education of present and future generations of the general public with regard to a disease that has been shrouded in fear and ignorance for centuries. Although isolation of Hansen's Disease patients is no longer necessary, approximately 90 patients have chosen to remain at Kalaupapa, the place they have come to regard as home. Their average age is 65 with approximately one-third of the population over the age of 70.

As one of many areas of the National Park System, Kalaupapa joined an exclusive group recognized for their nationally significant features. This group not only includes the magnificent natural areas of Yellowstone, Yosemite, Grand Canyon, Haleakala and Hawaii Volcanoes National Parks, but also includes such areas as the Statue of Liberty, Ellis Island, Independence Hall, the Washington Monument, Lincoln Memorial, Andersonville, Alcatraz and the Arizona Memorial, to name a few.

Preserving our nation's cultural and natural heritage is something in which we can take pride. Whether we are remembering our past mistakes or glorifying our accomplishments, we can have hope for a better future. It is not similar to erecting a memorial to those who fought in a war. We must present views from both sides of the issue, so that future generations will have the proper tools by which to make intelligent decisions when faced with similar circumstances.

The average visitor does not always recognize Kalaupapa as part of the National Park System and often asks: "When is the National Park Service going to take over?" or "When is Kalaupapa going to be a National Park?" The evolution of Kalaupapa into a completed National Historical Park will be a long process. At the present time, any increase in the federal operational budget is difficult to come by. However, the National Park Service also understands that the development of the Kalaupapa National Historical Park must be gradual. The National Park Service recognizes the importance of assisting the community as the Park develops, without disturbing the lifestyle and privacy of the residents, while at the same time identifying and preserving its precious resources. Historically, it takes a National Park area several years to become fully operational.



The Visitors' Quarters at Kalaupapa. In the absence of effective treatment for leprosy, fences and other physical barriers separated patients from non-patients at the Settlement.

(Continued on page 84)

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* Henry Law is the superintendent of the National Historical Park at Kalaupapa.

Address reprint requests or correspondence to Mr. Law: National Park Service, Kalaupapa, Hawaii 96742.

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AIR FORCE

KALAUPAPA

(Continued from page 82)

Kalaupapa is located within Kalawao County, which is not a part of either Maui or Honolulu Counties. Unlike most other areas of the system, the National Park Service only owns a small portion of the land within the Kalaupapa park boundary. The Park's authorized boundary is almost contiguous with that of Kalawao County, but it also includes a portion of Palaau State Park and some private land at the top of the pali (cliff). The local county government is in fact the Hawaii State Department of Health. Residents of Kalawao County have a vote only in State and Federal elections. Most of the land within the county is owned by the state. Of the approximately 10,000 acres in the park only 23 are federally owned.

Kalaupapa National Historical Park received its first operational budget in 1985 and began to hire a small staff at that time. It was anticipated that further increases would come in increments until the Park reached a point where it could fulfill the mandate of its enabling legislation. This legislation requires the National Park Service to preserve and interpret the historical, prehistoric and natural resources, and also to provide a well-maintained community in which the resident Hansen's Disease patients may live out their lives. It directs the Park Service to enter into cooperative agreements with the different land owners in order that the area may operate as a National Historical Park.

Once new funds are available, they will most likely come in small increments that will be put to use in priority order. The first priority will be to preserve and protect resources. There are over 400 buildings at Kalaupapa, of which 190 are on a priority list for preservation. It will



A dispensary complete with drug, laboratory, and operating rooms was built at Kalaupapa in 1906.

be a long time before all these structures are restored and preserved. Although the Department of Health will continue to maintain those structures that it needs to fulfill its mission, those they cannot maintain are of major concern to us. These include the prehistoric and historic structures that are not necessary for the current operation of the Settlement and the significant natural resources. Some of the more remote areas of the Park include rare native habitat for several endangered endemic species. These areas range from the dry northern tip of the peninsula, through the deep moist valleys, and up into the rain forests of the Puu Alii area. In addition, stone structures and other features of the landscape are representative of human occupation from pre-European contact to and through the early historic period in the first part of the 19th century. There are numerous stone walls and other agricultural features. House sites, living areas and religious structures or shrines are also present. Except in those areas where the archeological features have been destroyed, no area can be considered to be void of archeological significance. The sheer number and types of archeological items that exist today, the possibility that there has been 900 to 1,000 years of occupation and use within the Park, and the excellent state of preservation of these valuable historical resources combine to make Kalaupapa National Historical Park one of the richest and most valuable archeological preserves in Hawaii.

The primary resource of the park is its history and its current residents. Indeed, the establishment of Kalaupapa as a National Historical Park was an official recognition of the significance of Hawaii's experience with leprosy for the nation and the world. The early history of Kalaupapa and those who devoted their lives to the Settlement, including Father Damien, Mother Marianne and Brother Dutton, serves to attract and move visitors. It is the residents themselves, however, who have always inspired those with whom they have come in contact, from Father Damien, to Robert Louis Stevenson, to present day administrators and writers. It is the residents' stories that make Kalaupapa National Historical Park unique. The Park stands as a monument to their ability to endure and overcome, both physically and spiritually, not only the disease but also man's perennial inhumanity to man.



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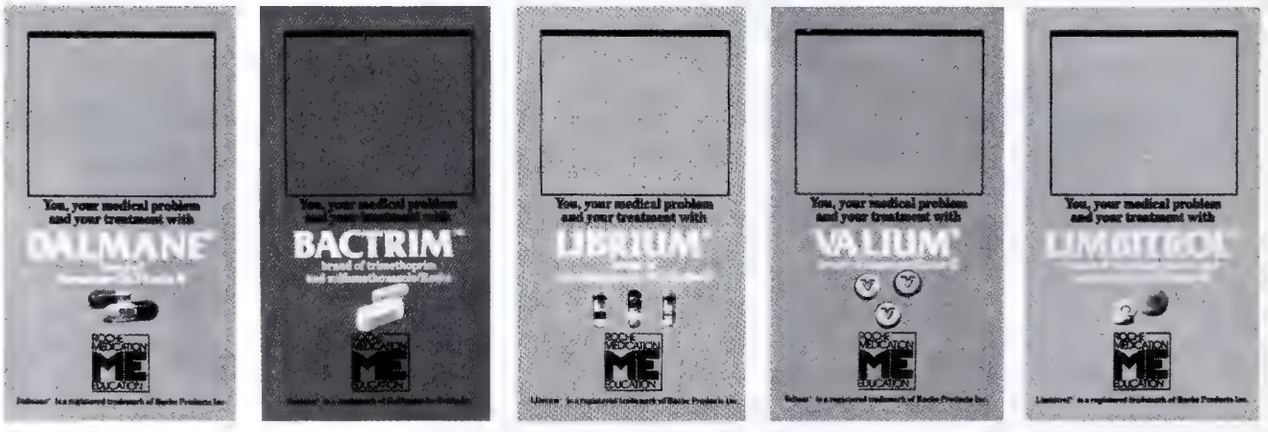
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A Veteran with PTSD

In this issue of the JOURNAL is an article by Roger S. Hamada, PhD, Research Associate at the Veterans Administration regional office in Honolulu. It is titled "Ethnic Identity and Vietnam: A Japanese-American Vietnam Veteran with PTSD."

We find the treatise very, very interesting and feel it fits in well with the JOURNAL as the kind of writing we desire to publish. It is obviously the result of good local research centered around a case study that should have an impact on our community of physicians.

J.I. Frederick Reppun, MD
Editor

The Lot of the Woman Physician

The reader may remember that in the December 1986 issue of the JOURNAL, Vol. 45, No. 12, we had six articles by *our* Women in Medicine introduced by Irwin Schatz, MD, professor of medicine at the UH John A. Burns School of Medicine.

It so happened that JAMA had a piece written by Margaret Levy, MD, of the Department of Surgery, Chicago Medical School, titled "Dr Mom" in its Jan. 23-30, 1987, issue (Vol. 257, No. 4) on page 536 under the heading of "A Piece of my Mind" (copyright 1987 by the AMA). It struck us at that moment as most pertinent to what we had done the month before in our JOURNAL.

Although it has taken us 11 months to obtain the necessary permissions, we feel that our readers, especially those who do not subscribe to JAMA, might relish this vignette that describes what must be sentiments shared by a great many "female doctors." Surely, it must apply equally to many women in other careers! We reprint it, therefore, for your edification.

J.I. Frederick Reppun, MD
Editor

A Fresh New Approach

Charles Rogers, our new and "young" public relations specialist at the HMA, recently introduced us to *The New Physician*. This is a publication of the American Medical Student Association (AMSA), address: 1890 Preston White Drive, VA 22091 (in case a reader is interested in subscribing to it at $15 a year).

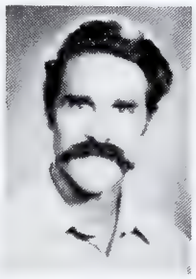
In its May/June 1987 issue we came across two items of more than passing interest. Consequently, we have obtained permission to reprint them.

One is headed UP Front: A Reader's Commentary, wherein H.G. Whittington MD, a practicing psychiatrist in Lubbock, Texas, propounds his sentiments under the title of "The So-called Good Old Days." He paints a picture of optimism for the future in the profession, which is exceedingly refreshing in this day and age of naysayers.

The other is an editorial by AMSA's new president, P. Preston Reynolds, writing in the President's Column under the title of "Striving for Professionalism." She is at Duke University School of Medicine.

We thought both pieces were of unusually high quality, and deserved to be shared with our readers.

J.I. Frederick Reppun, MD
Editor



FROM THE DIRECTOR OF HEALTH

John C. Lewin, MD

Strategies for Dealing with the AIDS Epidemic

The AIDS epidemic has created new challenges for us as health-care providers and for society. The well-established needs for strict confidentiality and protection from discrimination in employment, housing, and other aspects of community life on behalf of those who are seropositive for HIV, has caused national and international authorities to approach this infectious disease in non-traditional ways.

Since most screening for HIV occurs in the State's Department of Health anonymous testing sites, there is presently no way to provide medical follow-up or clinical assessment of those infected to determine what kinds of health services will be needed.

(Continued on page 99)

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Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

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Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

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Further, chemotherapy agents with considerable potential to prevent progression from seropositivity to symptomatic AIDS or ARC are emerging (although it may take three to five years to confirm preliminary positive in-vivo human trial results). Such therapeutic agents as experimental therapy with AL-721, ampligen (an RNA analog), very-low-dose AZT in conjunction with other synergistic agents, or suppression/treatment of other concurrent subclinical infections (herpes, EBV, HBV, treponemal diseases or others) are examples of possible approaches.

While prevention and education must and will be the Department's major thrust, we must also find ways to increase testing of persons at high or potential risk, without loss of confidentiality, and we must encourage those at risk or actually infected to agree voluntarily to medical monitoring, periodic evaluations, and to consider participating in clinical therapy trials as these become available in Hawaii.

Recent information published in Lancet, September 1987, implies that interpretation of ELISA results may be complicated in an indeterminate number of sexually-infected people who may not become seropositive (by present testing techniques) for up to three years. Thus, a great concern regarding "false-negatives" is now replacing previous concerns over predictable "false-positives"; the latter can be more easily re-evaluated by Western Blot or IFA testing.

We are most grateful for the rapid response of the State's Department of Human Services in the development of the Medicaid waiver request to provide community-based home health services to people with AIDS. This initiative will allow for earlier discharge of hospitalized patients and possibly avoid costly hospital admissions.

The Department of Health is developing a special BL-3 laboratory capable of virus culture and special viral studies. It is also establishing coordinated efforts with other research and laboratory facilities in Hawaii in order to attract research and clinical therapy funds to complement our major prevention, education, health-care financing, and testing initiatives.

The nationwide AIDS caseload is over 47,000, and it climbs daily; this figure does not include those individuals with HIV infections needing health and other human services. The spectrum in Hawaii of an estimated 2,000 to 3,000 patients with diagnosed indicator infections or cancers consistent with frank AIDS by 1991 will cost as much as $100 million per year for necessary care, in addition to untold human suffering. The patients will include our hemophiliac children and adults, recipients of transfusions before 1985 when blood screening was instituted, a significant and increasing number of unsuspecting heterosexuals, as well as the traditional high-risk groups and associated infants.

This is a war and we must take extraordinary action. The increasing number of those needing assistance of some sort will continue to tax every possible resource. Therefore, the only feasible strategy to solve this multifaceted problem is a multifaceted approach. Toward this end the Department of Health is committed to taking a leadership role, which includes facilitating a strong coordinated effort by all concerned individuals and agencies, both public and private.

My staff and I are dedicated to safeguarding the confidentiality of the person with AIDS, seeing that that individual gets compassionate treatment, and protecting the public health in general. We need the cooperation of all physicians and welcome their comments and suggestions. Please write to us c/o Director, AIDS Project.

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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

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Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Ethnic Identity and Vietnam: A Japanese-American Vietnam Veteran with PTSD

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Prevalence of reported cases of Post Traumatic Stress Disorder (PTSD) among Asian-American Vietnam combat veterans in Hawaii is disproportionately low. We argue that this is due to under-reporting rather than to actual low rate of occurrence. A case description is presented highlighting the unique difficulties of Asian-American veterans, not only while in Vietnam but also upon their return. It is postulated that these difficulties may increase Asian-American veterans' vulnerability to PTSD. It is further argued that these veterans may initially present with stress-related physical complaints in physicians' practices, rather than in mental-health settings. Guidelines for discriminating PTSD from other stress-related disorders are offered.

A number of Vietnam combat veterans continue to suffer problems of adjustment related to their wartime experience. Many of these problems are associated with post traumatic stress disorder (PTSD), including intrusive memories and nightmares of the war, anger toward an unsympathetic American public that had portrayed these men as perpetrators of an immoral war, and guilt not only for having survived the war when so many of their buddies had not, but also for behavior during the war (see Appendix A). In addition, many veterans suffer a form of PTSD in which they experience no lasting symptoms immediately after returning from combat but do begin to suffer disabling symptoms after extended delays.

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Many Hawaii Vietnam veterans suffer adjustment problems associated with their wartime experiences. We suspect that a substantial proportion of these veterans are Asian-Americans who are not seeking help from specialized mental-health service providers such as psychiatrists and psychologists. These veterans, like other Asian-Americans, may be deliberately avoiding psychotherapy, and instead somatize and seek medical treatment for their problems.[2] Non-psychiatric physicians may therefore be providing the first points of contact between these veterans and the health-care system.

The purpose of this paper is to alert physicians who have Asian-American Vietnam veteran patients to the potential psychosocial conflicts experienced by these men, which may contribute to both somatic and psychological symptoms.

The nature of the Vietnam war — including the absence of clear lines of battle, widespread use of guerilla tactics, difficulty in discriminating between civilians and combatants, and the resulting high rates of casualties among civilians, women and children — no doubt contributed to the psychological trauma of Vietnam for veterans. Moreover, because the war was fought against an Asian people, it may be hypothesized that Asian-American veterans experienced Vietnam-related stressors that were unique to their ethnic background, in addition to all the other stressors experienced by veterans in general.

The unique stresses encountered by Asian-American soldiers stemmed, in part, from the promulgation by the military of what has been termed the "gook syndrome."[3,4] The "gook syndrome" was in essence the dehumanization of the Vietnamese people on the basis of race. Its component elements were race consciousness, ethnocentrism, victimization and a sense of technological superiority. In referring to the Vietnamese as "gooks" and "dinks," the military encouraged young soldiers into thinking of Vietnamese as less than human so that the moral sanctions against killing fellow humans would not apply to killing Vietnamese. The gook syndrome became an accepted norm, which if ignored, threatened one's survival. Leventman and Camacho[3] write: "Those GIs attempting to break away from the syndrome and humanize the Vietnamese risked social isolation from their buddies that could literally threaten survival, especially in combat" (p. 62).

Asian-American soldiers were indoctrinated into the gook syndrome as emphatically and effectively as were the recruits of other ethnic backgrounds. Lifton[4] relates an anecdote about visiting the University of Hawaii where he met and appeared on a panel with a young leader of the "new Hawaiian nationalist" movement. Talking with him later, Lifton was surprised to hear that the young man had fought in Vietnam: "Like all the GIs, I just killed everyone. They were all gooks to us. . . . But when I came back [to Hawaii] and looked at all the faces in the shopping center, they looked just like all the people I killed. I felt very strange and very bad" (p. 215). Lifton[4] comments that this young man felt guilt not only about the killing but also about having, in the process, entered into the gook syndrome, since he was a non-white himself.

Ironically, while undergoing intense training designed to mold them into homogenous fighting units and being indoctrinated into the gook syndrome, some Asian-Americans were at the same time singled out critically by "non-coms" and officers because of their ethnicity. A Nisei marine corporal reported being identified as a gook in his training class. "I was used as an example of a gook. You go to class and they say you'll be fighting the VC (Vietcong) or the NVA (North Vietnamese Army). But then the person who was giving the class will see me and he'll say 'He looks just like that, right there.' "[5]

These are but two examples of the many race-related stresses encountered by Asian-American soldiers during the Vietnam involvement. Yet, to our knowledge, there have been no descriptions of PTSD among Asian-Americans. This paucity of information relating to Asian-American Vietnam veterans may be due, in part, to the fact that few such veterans seek help for Vietnam-related problems. According to the Vietnam Vet Center Program national statistics for the six-month period of October 1983 to March 1984, only 0.5% (380 out of 75,169) of the veterans served by Vet Centers were of Asian ancestry.[6] We believe that the low rate of help-seeking by Asian-American veterans stems most likely, not from a low prevalence of adjustment problems in this group, but rather from the well-known reluctance of Asian-Americans to share their personal problems with "outsiders," and from the shame with which psychiatric illness is regarded in this group.[7]

Asian-American and other veterans with war-related adjustment problems do, however, manifest physical as well as psychological symptoms. Significant correlations have been found in the general veteran population between PTSD symptoms and complaints of respiratory, gastrointestinal, nervous system and general health problems.[8] These complaints are in addition to the physical problems occurring secondary to drug and alcohol abuse experienced by veterans with PTSD who try to "self-medicate" against the intrusive dreams, memories, thoughts and feelings that are part of the disorder. Furthermore, as observed by Rogers and Izutsu,[6] "The constant concern for proper behavior and the stigma against mental illness are probably two explanations for the general tendency of the Japanese (as compared with Caucasians) to somatize all illness and to deny the possibility of an emotional component. Being 'ill' is a legitimate, socially acceptable manner of getting care; consequently, [Japanese-American] patients' complaints are usually physical" (p. 96).

Given this trend by Vietnam veterans with PTSD, and particularly by Asian-American veterans, to view physical symptoms as a more acceptable expression of adjustment problems than "mental" symptoms, it is likely that medical doctors and other primary health-care providers will be the first point of contact between these individuals and the health-care system.[2] Such physicians should therefore be sensitive to the possibility that some of their Asian-American patients who are Vietnam veterans and who appear to be functioning adequately in their daily lives may be suffering from symptoms of PTSD.

In light of the paucity of research relevant to the adjustment problems of Asian-American Vietnam veterans, the following case presentation is offered as an example of the unique conflicts that these veterans may be experiencing. This case is proferred as a step toward helping primary health-care providers become acquainted with the kinds of issues with which some of their Asian-American Vietnam veteran patients may be struggling.

Case Description

A 38-year-old Japanese-American served in the Army in Vietnam during 1968 and 1969. He was originally seen at the Vietnam Vet Center in Honolulu in June 1983. At that time, he presented with complaints of being increasingly disturbed by intrusive and involuntary recollections and memories of Vietnam. In addition, he noted an increase in his use of alcohol and was having increased marital problems. Following this initial contact, he was not seen again until September 1983, at which time he presented in acute crisis, voicing thoughts of killing himself, and appeared severely depressed. He was admitted as an inpatient. During this one-month hospitalization, he was treated for alcohol dependence and depression; he attended a post-traumatic stress-disorder therapy group twice a week. Following his discharge from the hospital, he continued to attend PTSD therapy group sessions regularly, as well as to see a Vet Center counselor in individual therapy. The following information was obtained during individual interviews with the patient.

The patient was born in Japan to a mother who was a Japanese national; his father, a Hawaii-born Japanese-American, was an enlisted man in the Army. The patient had lived in Japan until the age of 10, attending an American school. He recalls feeling singled out as most of his classmates were Caucasian, and he was teased about his ethnicity. Although he reports developing some warm friendships, he recalls having to protect his rights, sometimes by fighting.

The patient recalls his childhood as being characterized by "having too much responsibility, too fast." For example, he was often put in charge of his younger sisters, and was responsible for helping his mother with many household chores. As a result, he had little time to play with other children.

His relationship with his mother was characterized by conflict and anger. He recalls being hit with a ruler and being kept out in the back yard at night. He associated his mother's concern for his school performance with her efforts to maintain the family pride. He reported that his mother held personal and family pride above all other values, and this concern with upholding family pride pervaded all facets of his life. He recounts how, in response to his poor school performance, his mother told him that "[he] was better off dead." He stated, "[Mother] was always ashamed of our family."

When the patient was 10 years old, his father was transferred to Hawaii and brought his family with him. The boy's high school years in Hawaii were a troubling time for him. He reports having few friends and no girlfriends, cutting classes and almost flunking out of school. He chose to enter the military following high school, in part because his grades were poor.

Entry into the military had great significance for him. He seems to have perceived it as an opportunity to redeem himself for the shame he had brought to his family with his poor school performance. The significance of this passage into the military

was further underscored by the actions of his paternal grandfather who, in the course of quasi-ritualistic talks with the patient, shared sake with him and talked of honor and of "*Bushido,* the way of the samurai warrior."

Joining the military was akin to entering the warrior class and being governed by the Bushido code. He resolved, as his grandfather had admonished, to "serve [his country] with pride." This meant that he should "always do [his] best, regardless of [his] own feelings and not to show cowardice in front of [his] friends. . . . Never be afraid." The patient summarized his understanding at that time of his duty as a soldier in the following way: "What it came down to [is], as a samurai, you owe your dedication to the emperor and, as a soldier, you owed your dedication to the president."

The patient reported feeling calm when he received his orders to Vietnam, in contrast to another soldier in his unit, who broke down and cried when he also received Vietnam orders. His father greeted the news of the son's assignment to Vietnam with silence, although the patient felt that his father was "a little scared" for him because his father had also been scheduled to go to Vietnam if he had not retired from the military. When his mother heard of his going to Vietnam, she showed little emotion except to exhort him to "just do your best."

In compliance with this strong personal and family mandate to be a "good samurai," he served with pride in Vietnam. As a combat engineer, he was decorated twice for valor, and was awarded a Purple Heart for wounds suffered in action. By earning these decorations, the patient had upheld his family honor and made his father and grandfather proud of him. In the military, he identified himself proudly as being from Hawaii and acknowledged that "guys from Hawaii . . . always put out a little bit more. What has to be done, they do it."

At the same time, however, the realities of war and military life began to erode the pride that he felt toward serving his country and toward his dedication to the president. Much of this taint derived from race-related incidents and issues. He was often singled out critically because of his race by officers and by fellow GIs who called him "gook." Once, an officer asked him if he spoke English.

His initial reactions to these racial slurs were to consider them a "big joke" and to laugh them off. He considered himself the "token Oriental" in his unit. However, as the racially insensitive comments continued, he began to feel offended and "took it too personally after awhile." At that point, he began fighting with the men who called him a gook, after which the frequency of these comments diminished.

In contrast to, and perhaps in part as a result of, his negative race-related experiences with fellow Americans, the patient reported a number of positive experiences with Vietnamese people. He related how he attended religious services outside the camp boundaries and spent his time among the Vietnamese villagers, how Vietnamese children would gather around to sit and talk with him. "Because I was Oriental . . . they all saw I used to understand more . . . it made me feel that they accepted me some . . . all Orientals."

The patient began to experience ambivalence regarding his loyalties and values — ambivalence together with confusion about whether he should identify himself more strongly with being an Asian or being an American. This ambivalence was catalyzed by the nature of the war in Vietnam. For example, as a combat engineer, he was required to knock down houses of Vietnamese villagers. This job became more and more difficult for him to perform as he began to relate the villagers to his own parents. "You relate to your own parents and somebody comes and knocks their house down. They may be Vietnamese, but they're still Oriental. It's hard not to feel something. . . . You have a conflict going on. Sometimes it's hard to do what's right versus to do what the Americans say to do."

Vietnamese people to whom he extended his friendship were often involved in, and were killed in military encounters with the Americans. An old man with whom the patient had shared cigarettes was killed while participating in an assault against the Americans. A woman and her young daughter who sold soft drinks to the soldiers were killed after blowing up two trucks and killing three Americans. The patient reported dreaming about this incident, particularly about how bullets had ripped the little girl's body apart. He related that as he looked at the girl's body, he thought about his own sister who was about the same age, and he was shocked by a strong feeling that "It's not a war anymore. . . . It's a wholesale slaughter. . . . That's all it is, just kill, kill, kill." This last statement represented a shift in the patient's perception of Vietnam from being a war of honor to being just a context for slaughter, where considerations of justice and fairness did not apply.

Another incident seems to have had a particularly personal impact on the patient. He was with his unit clearing vegetation and came under intense small-arms fire. As they returned fire, he saw an old Vietnamese woman firing a weapon at them with a child beside her holding ammunition. He and other soldiers fired at them, killing the woman and child. Although so many men were firing weapons that it could not be determined who actually fired the bullets that killed the woman and child, the patient described this incident as "I ended up killing another woman." The full impact of this incident only struck him some days later, after he had returned to the rear. He was in an NCO club, drinking, and thinking of the woman and child. "I just kept on drinking and drinking. That's where I got started. . . . I looked at the old lady and I was thinking of my mother. And I was looking at the kid and I was thinking of all my sisters. It was like killing your own kind. My own mother and sisters." The patient epitomizes the poignant and unique dilemma of many Asian-American soldiers who had been in combat in Vietnam: "At that time, it got to a point where it was like fighting your own people. . . . You were put in an impossible situation . . . it's like you were asked to fight against yourself."

Discussion

This man's experience, as described here, consisted of elements that are unique to him, as well as elements that were probably shared by other Asian-American GIs in Vietnam. The unique elements lie in the patient's family situation, including having a Japan-born mother and being raised during his early years on a military base in Japan. Because his family was less acculturated than a Japanese-American family in which parents were first- or second-generation Americans, there may have been a greater emphasis on the importance of family pride and shame in his family.

On the other hand, the patient's experiences in the military of being singled out because of his race, in negative ways (by fellow soldiers), as well as in positive ways (by Vietnamese children), were probably also common to other Asian-American GIs. In addition, his reactions to being involved in the deaths of Vietnamese civilians and the destruction of their homes and lands were probably also shared, to a greater or lesser degree, by other Asian-American soldiers. For these soldiers, then, the general stress of being of a minority group[9] was compounded by the unique circumstances of being at war with people of similar ethnic background.

(Continued on page 105)

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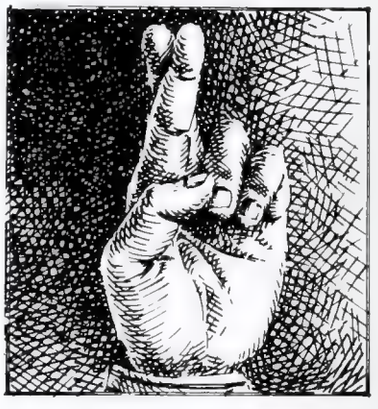


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Specifically, this man was indoctrinated as an American GI into the "gook syndrome," trained to dehumanize the Vietnamese. Hostile encounters with non-Asian GIs and friendly encounters with Vietnamese people weakened the effects of this indoctrination, however, so that he began to empathize with the Vietnamese people. This growing empathy was accompanied by his increasing identification with his own Asian-ness, an identification that was greatly strengthened by the distaste he felt for those aspects of his job that involved destroying the homes and property of, and taking the lives of Vietnamese women and children. These aspects of war had a great impact on him because he imagined his mother and sisters suffering as the Vietnamese women and children were suffering. It is also possible that this revived conflicts in his feelings toward his mother, exacerbating his discomfort over any residual angry feelings toward her. The resulting interactions between loyalties and identity and the guilt he experienced were not easily resolvable for the patient; it probably contributed significantly to his persistent depression, PTSD and substance-abuse problems.

In addition to race-related stressors, the patient also experienced the more universal traumas of combat. These traumas included having to dig mass graves for dead Vietcong, being wounded by shrapnel from a land mine, and witnessing the death of his assistant who was killed while operating the patient's machine. It may be postulated that for him, and perhaps for other Asian-American soldiers, race-related stress generally amplified the effects of more commonly experienced, combat-related stressors, thereby placing them at increased risk for suffering the symptoms of PTSD and other sequelae of combat in Vietnam.

One specific way in which race-related stress may have increased the risk for PTSD was by interfering with development of close interpersonal relationships between these GIs and their fellow combat soldiers. It has been argued[10] that the combat unit provided the all-important social context which allowed the numerous acts of violence required in combat, a context that permitted the individual soldier to begin to reconcile his actions with his inner beliefs and values. Being deprived of this social context and support would result in internal conflict and adjustment problems such as those our patient experienced. Stretch[8,11] has reported that the quality of social support received during Vietnam duty may either moderate or exacerbate PTSD symptoms associated with combat experience. He found that veterans who did not receive positive social support while in Vietnam had higher levels of PTSD symptoms than did veterans who did receive positive support from their fellow combat soldiers.

When they returned home from Vietnam, Asian-American soldiers tended, again, to receive little support from their families and to be given little opportunity to talk about and integrate their war experiences. Asian-American soldiers returned from combat to families in which implicit norms proscribed their discussing their war experiences or their feelings about these experiences. It is important for members of Asian-American families, particularly Japanese-American families, to conform to the group norm.[12] The norm in these families is for implicit, nonverbal, intuitive communication rather than for explicit, verbal and rational exchange of information. Family members rely more on non-verbal cues and physical contact for real communication.[7,12,13] Such a socio-emotional family context may work against the process of cognitive-emotional assimilation that Horowitz[14] theorizes must take place for the veteran to come to terms with the trauma experienced in war. The failure of this assimilation process results in the cycle of intrusive and avoidant symptoms that characterize post-traumatic stress disorder. In the case of Asian-American veterans like our patient, just being with his family may be a reminder of his traumatic experiences with Vietnamese women and children and may contribute to PTSD symptoms and depression.

Despite the hypothesized increased risk for PTSD and depression among Asian-American veterans, relatively few of these men seek psychological help for problems of adjustment. It may be thought that Asian-Americans are in some way "protected" or "invulnerable" to the effects of extreme traumatic stress. We know of no data, either formal or informal, which would support this contention. Rather, we would argue that low rates of help-seeking among these veterans is a culture-related phenomenon. Yamamoto and Acosta[15] report that the stigma of mental illness in Asian-Americans remains so great that, even among individuals who are third- and fourth-generation Americans, there is hesitation to admit to psychological problems. In addition, the Japanese-American veteran may view his military service and its sequelae as part of his obligation (Japanese *On* to his country.[7]

Symptoms of stress and depression may, instead, be revealed to outsiders as somatic symptoms. Data from Japanese-American college students indicate that they are more likely than Caucasian students to believe that mental illness is caused by somatic rather than psychological factors.[16] Furthermore, depressed Japanese-Americans report more gastrointestinal complaints than depressed Caucasian-Americans.[17] Given these culturally sanctioned means for expressing stress-related symptoms, it is very likely that Asian-American veterans suffering PTSD and depression will initially seek help from primary health-care providers. In our patient's case, we unfortunately do not know whether he had sought help for stress-related symptoms prior to contacting the Vet Center. Nevertheless, based on the research described above and on our own clinical experience, we would suggest that veterans who present with somatic complaints that may be tied to Vietnam-related stress or to current PTSD will tend to share the following characteristics with patients who are suffering general stress-related symptoms: Complaints of gastrointestinal or CNS symptoms or general health problems that do not have clearly established etiologies and are exacerbated by stress; histories of frequent job changes or periods of unemployment, often associated with problems with bosses or supervisors; histories of or currently experiencing marital problems; histories of overuse, abuse, or dependence on alcohol or other drugs.

In addition to these general characteristics, patients who suffer specifically from Vietnam combat-related PTSD will be more likely to range in age from near 40 to their mid-60s and be more likely to have experienced heavy combat in Vietnam. The most widely accepted definition of heavy combat incorporates some or all of the following: Firing at the enemy in a combat situation; repeated exposure to enemy fire with risk of being killed or wounded; seeing people killed or wounded or people who have been killed or wounded; being personally responsible for the death of an enemy; being wounded in combat oneself; being personally responsible for the death of a civilian and experiencing multiple tours of duty in Vietnam.

One or two questions about a patient's possible combat experience (Appendix B) can help the physician discriminate between patients possibly suffering PTSD-related stress symptoms and those patients suffering other stress-related symptoms. In cases of PTSD, it behooves the primary-care providers to be sensitive to the war-related and race-related traumas possibly contributing to symptoms, and to refer these men for adjunctive treatment to psychiatrists and psychologists who specialize in treating combat-related PTSD.

Appendix A

Diagnostic Criteria for Post-traumatic Stress Disorder[1]

A. The person has experienced an event that is outside the range of usual human experience and that would be markedly distressing to almost anyone.

B. The traumatic event is persistently re-experienced in at least one of the following ways: (It is specified as "delayed onset PTSD" if symptoms do not appear until after six months have elapsed since the traumatic experience.)
   (1) Recurrent and intrusive distressing recollections of the event;
   (2) recurrent distressing dreams of the event;
   (3) sudden acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative [flashback] episodes, even those that occur upon awakening or when intoxicated);
   (4) intense psychological distress at exposure to events that symbolize or resemble an aspect of the traumatic event, including anniversaries of the trauma.

C. There is persistent avoidance of stimuli associated with the trauma, or numbing of general responsiveness (not present before the trauma), as indicated by at least three of the following:
   (1) Efforts to avoid thoughts or feelings associated with the trauma;
   (2) efforts to avoid activities or situations that arouse recollections of the trauma;
   (3) inability to recall an important aspect of the trauma (psychogenic amnesia);
   (4) markedly diminished interest in significant activities;
   (5) feeling of detachment or estrangement from others;
   (6) restricted range of affect, e.g., unable to have loving feelings;
   (7) sense of foreshortened future, e.g., does not expect to have a career, marriage, or children, or a long life.

D. Symptoms of increased arousal (not present before the trauma) persists as indicated by at least two of the following:
   (1) Difficulty falling or staying asleep;
   (2) irritability or outbursts of anger;
   (3) difficulty concentrating;
   (4) hypervigilance;
   (5) exaggerated startle response;
   (6) physiologic reactivity upon exposure to events that symbolize or resemble an aspect of the traumatic event (e.g., a woman who was raped in an elevator breaks out in a sweat when entering any elevator).

E. The disturbance (symptoms in B, C, and D) has a duration of at least one month.

Specify "delayed onset" if the onset of symptoms was at least six months after the trauma.

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CONTRAINDICATIONS
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Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

References:
1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly.* Edinburgh, Churchill Livingstone, 62-69, 1984.

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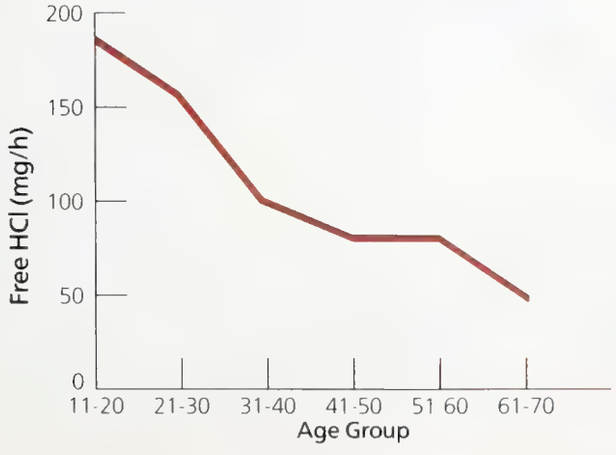
Specialized ulcer therapy

When advancing age signals reduced acid secretion



If your duodenal ulcer patient is over 55, decreased mucosal resistance is more likely to cause an ulcer than hypersecretion of acid-pepsin.[1] A tendency toward lower acid secretion with advancing age has been shown.[2,3]

Declining gastric secretion and age[3]



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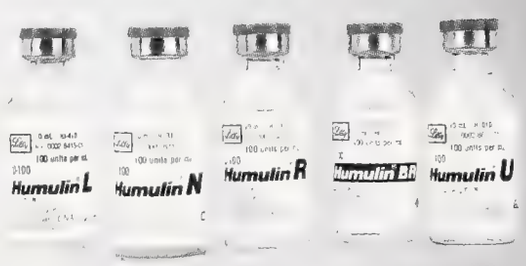
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Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.



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Appendix B

Possible Questions for Assessing Degree of Combat Exposure[18]

The following questions are organized such that increasing combat exposure is associated with affirmative responses to questions farther down the list.

1. Were you stationed in Vietnam?
2. Would you say your unit was primarily combat, combat support, or service support?
3. Did you fire a weapon or were you fired upon in combat?
4. Did you see the death or injury of a U.S. serviceman?
5. Were you responsible for the death of an enemy who was in the military?
6. Were you wounded in combat?
7. Were you responsible for the death of an enemy civilian?
8. Did you serve a third tour of duty in Vietnam?

BIBLIOGRAPHY

1. American Psychiatric Association: Diagnostic and statistical manual of mental disorders, third edition, revised. Washington, D.C.: author, 1987.
2. Sue D, Sue S: Cultural factors in the clinical assessment of Asian Americans. *J Consulting Clin Psychol:* 55, 479-487, 1987.
3. Leventman S, Camacho P: The "gook" syndrome: The Vietnam war as a racial encounter. In Figley CR, Leventman S, eds. Strangers at home. New York: Praeger, 55-70, 1980.
4. Lifton RJ: Home from the war. New York: Basic, 1973.
5. Thorne D, Butler G: The new soldier. New York: Collier, 1971.
6. Brende JO, Paron ER: Vietnam veterans: The road to recovery. New York: New American Library, 1985.
7. Rogers T, Izutsu S: The Japanese. In McDermott JF, Jr., Tseng W, eds. People and cultures of Hawaii. Honolulu, HI: University Press of Hawaii, 73-99, 1980.
8. Stretch RH: Incidence and etiology of post-traumatic stress disorder among active duty army personnel. *J Appl Soc Psychol:* 16:464-481, 1986.
9. Moritsugu J, Sue S: Minority status as a stressor. In Elner RD, Jason LA, Moritsugu JN, Farber SS, eds. Preventive psychology. New York: Pergamon, 162-174, 1983.
10. Catherall DR: The support system and amelioration of PTSD in Vietnam veterans. *Psychotherapy:* 23:472-482, 1986.
11. Stretch RH: Post-traumatic stress disorder among U.S. army reserve Vietnam and Vietnam-era veterans. *J Consulting Clin Psychol:* 53:935-936, 1985.
12. Hsu J, Tseng W, Ashton G, McDermott JF, Jr., Char W: Family interaction patterns among Japanese-American and Caucasian families in Hawaii. *Am J Psychiatry:* 142:577-581, 1985.
13. Johnson FA, Marsella AJ, Johnson CL: Social and psychological aspects of verbal behavior in Japanese-Americans. *Am J Psychiatry:* 131:580-583, 1974.
14. Horowitz MJ: Stress response syndromes. New York: Jason-Aronson, 1976.
15. Yamamoto J, Acosta FX: Treatment of Asian-Americans and Hispanic Americans: Similarities and differences. *Am Acad Psychoanalysis:* 10:585-607, 1982.
16. Sue S, Wagner N, Ja D, Margullis C, Lew L: Conceptions of mental illness among Asian and Caucasian-American students. *Psychol Reports:* 38:703-708, 1976.
17. Marsella AJ, Kinzie D, Gordon P: Ethnic variation in the expression of depression. *J Cross Cult Psychol:* 4:435-459, 1973.
18. Lund M, Foy D, Sipprelle C, Strachan A: The combat exposure scale: A systematic assessment of trauma in the Vietnam war. *J Clin Psychol:* 40:1323-1328, 1984.

Council Capers December 1987

Happiness is: The smell of a Christmas tree, the presents, the smile of little children, and the Holiday Spirit!

Memories: Would you believe that when I first became involved with the HMA, the meetings took place in the Mabel Smyth Building, adjacent to The Queen's Hospital for many, many years? Within the last decade, the HMA made a bold move, to purchase (leasehold) the Ward Street building (across Gem store). And, just last night the HMA had its first meeting, in our (yours, too), very own brand new four-story HMA office building on the mauka side of Beretania Street, almost right next to the corner at Keeaumoku Street. Although not completely refurbished, the new conference room boasted beautiful parquet flooring and a spanking new carpeted area to one side.

Meeting Notes: Our new HMA president, Dr. James Lumeng, arrived a few minutes late and was appropriately presented with a gift to the HMA, from the U.H. Medical Student delegation: A beautiful koa clock! This was in appreciation for our sponsorship of the attendance at the HMA meeting on Kauai and also to the ASMA meeting in Seattle, Washington.

Congratulations! Maui's membership grew to 128 members (120 last year); this may be the best percentage growth in Hawaii.

The treasurer's report by Dr. John McDonnell was encouraging in spite of our later-than-expected occupancy of our new building.

Hats off: To Dr. Paul DeMare and his CME committee members for a letter of commendation for their work, from the National CMME "representing an (element of excellence), which may be recommended to other states."

Dr. Calvin Kam reported on the last AMA meeting, as did Dr. Neal Winn on the recent Hospital Medical Staff section of the AMA.

The Medical Tort Reform Coalition needs your help. Please send $200 to $400 (non-surgeons and surgeons respectively) to the HMA, to effectively launch a program for Tort Reform. Only less than 7% or 115 members have so far contributed to this very important cause. The Legislature is already open, and the opposition, as you know, is stiff!

Tip of the Month: The Royal Garden at the Ala Moana Hotel is an excellent restaurant. Also highly recommended is Campbell's Chop Suey in Kapahulu — Thanks Cal!

Denis J. Fu, MD
Councilor
Maui County Medical Society

The So-Called Good Old Days

H.G. Whittington, MD*

Why are middled-aged physicians so unhappy these days? When I was a medical student, intern and assistant — admittedly a very long time ago — my elders radiated self-satisfaction. They were suffused with the glow of victory over disease and were enjoying ever-rising levels of affluence.

Nowadays, doctors of my generation talk wistfully of early retirement, bemoan their loss of automony, and ask why anyone would go into medicine now.

I have wondered what effect this must have on physicians who are just developing their professional identities, ordering their personal and career priorities, and shaping their style of physician-patient relationships. And I wonder what implications it has for medicine in the future.

We all tend to model our behavior after those in positions of greater authority or stature. But while we generally recognize our desire to emulate people we admire, we rarely notice when exposure to people who we do not like begins to shape our behavior.

I began to reflect on this recently when a resident whom I supervise shook his head, sighed and walked away muttering about "paperwork" with the same martyred demeanor that I have come to know too well in my contemporaries. Then I began to notice this self-pitying, "it's not like it was in the old days" posturing with more frequency among housestaff. The medical students, however, seemed unaffected — probably because they had experienced very limited contact with aging practitioners.

Well, I've got news for you: The old days weren't so great. As an intern, I did tonsillectomies on identical twins and one later bled to death. The ENT resident — I don't even know if there was a staff physician — was nowhere to be found. I was undersupervised every step of the way; while I developed a certain MASH-like derring-do, many patients suffered as a result of my ignorance.

When I began my first year of psychiatric residency, Thorazine was just being introduced in this country. Electric shock therapy was used extensively, as were cold wet sheet packs, insulin coma, Scotch douches, warm tub baths, restraint, seclusion and lobotomy. Psychotherapy techniques were flourishing and were helpful for the neurotics and the "worried well," but helped those with major mental illness very little. Meprobamate (Miltown or Equanil) was the only available anti-anxiety agent, antidepressants were not yet in use, and lithium carbonate treatment for manic-depressive illness was unheard of. Most bipolar illness was diagnosed as schizophrenia — in fact, almost everyone was diagnosed as schizophrenic on this side of the Atlantic. The human warehouses we called state mental hospitals were just being turned into active treatment programs.

So, things weren't so great in the good old days of psychiatry. Nor for many of the other specialties, either. While valve replacements and commissurotomies had revolutionized surgery, coronary bypass was years in the future. Cardiologists were admired for their intelligence and somewhat academic style, but they read ECGs and prescribed digitalis for old people, a far cry from the high-tech virtuosity of recent years.

What I am saying is that the actual practice of medicine is more gratifying than ever before, if your primary goal is helping people. If it is less satisfying than in the past, it suggests to me that goals other than the humanitarian one of relieving suffering and preventing premature death have priority.

This confusion in values among American physicians has confronted me at every stage of my career: Are we here to alleviate suffering, to advance our own careers through research and publication, or to make a lot of money? These three mainstreams in American medicine — the caregivers, the thinkers and the exploiters/acquisitors — buffet young doctors about until they finally choose one or the other. While not mutually exclusive, each subculture demands a certain allegiance from its followers.

In my generation the exploiters/acquisitors held sway, in the private sector at least. Not surprisingly, they now moan the loudest about how mistreated and unappreciated they are. If something goes wrong — as it certainly has in the economics of American medicine — how much easier it is to say, "I didn't do it! He (in this case government) did." Usually the individuals in the most self-serving specialities feel the most mistreated! They are the ones who threaten to retire in protest. Fine. Let them fade away. It is these rampaging capitalist doctors who have brought on price controls and government regulation in the first place.

The doctors who haven't become rich don't threaten to retire early; we can't afford to. A lot of us chose specialties that do not allow us to accumulate great wealth. Others have elected to pursue other values like family, creative use of leisure time, implementing one's values by providing free care or working in public sector clinics, social activism, or volunteer teaching.

Those of us who have used life as a constructive opportunity to implement our own values — seeing one's life as the ultimate creative work of art — don't complain as much about the brave new world of increased control and decreased earnings. We don't feel that we have been cheated, as do doctors who have pursued financial self-gain to the exclusion of all else. Money is a poor substitute for love and respect of family, for a sense of virtue that comes from helping the poor, for the euphoria from implementing one's own values in this life, or for the peace that flows from thinking and feeling deeply about existence.

In my generation we sometimes felt a little ashamed to confess our idealism. Those of us who chose public service were seen by our prosperous colleagues as probably incompetent, or at best suckers. I hope that the present generation of physicians will not feel so constrained.

The verdict of history is not yet clear. But it seems certain that no society can allow a vital profession like medicine to pursue unbridled self-interest. Society still affords physicians enormous stature, freedom and power. And we have a powerful obligation to return that trust with integrity, diligence and gratitude.

Every day — well, almost every day — I am grateful to be a physician.

*Psychiatrist, Lubbock, Texas

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Striving for Professionalism

P. Preston Reynolds*

In his article, "Are Physicians Professionals?" (Pharos, Summer 1986), Dr. Richard P. Foa sets out the qualities that characterize a profession. His criteria together with my experience at several recent meetings about the medical profession have made me acutely aware of how the educational process inhibits the development of true professionals.

Foa's criteria, based on the writings of Abraham Flexner, make several important points about the activity of a profession:

- It is intellectual and must embody virtues (e.g., honesty, courage, justice, creativity) essential to the achievement of excellence.
- It is practical and characterized by sets of skills and values that are further developed by lifelong learning and that are taught to novices.
- It is autonomous, complex and absorbing, yet leads to the formation of collegial organizations (and relationships).
- It receives the acknowledgment of society because it fulfills the above criteria and because the activity of the profession as a whole furthers goals set for it by society.

True professionalism therefore embodies an individual standard of excellence, and a commitment to achieve excellence through behavior that is generous, honest, courageous and creative. Furthermore, the development of professionalism should not be equated with merely the acquisition of technical skills. Neither can it be pursued with a set of competing objectives such as wealth or power. Service to society is integral to any profession. As Flexner was keen to point out, insofar as law and medicine "are prosecuted at a mercenary or selfish level, (they) are ethically no better than trades." Professionalism, therefore, incorporates the acquisition of skills as well as the values that commit one to personal and societal goals.

The medical education process fails miserably at instilling the values of a profession. Our brilliance and competency as physicians are measured by an ability to master multiple-choice examination procedures. We find ourselves competing with peers who should be considered colleagues, in part because lectures do not encourage students to cooperate with each other in the learning process. Rarely do we discuss the ethical dilemmas facing physicians who must practice medicine in a world of increasingly sophisticated technology or the importance of maintaining the integrity of the dying process. There is little time for reflection about our identity as a physician and rare mention of the sacred relationship between the doctor and patient or the importance of communication. In addition, what creative instincts exist quickly are suffocated beneath piles of course outlines and textbooks.

Furthermore, our clinical training occurs primarily within the hallowed walls of the academic medical center by faculty who must increasingly support the operations of the hospital and medical school with income from patient care. Education once again takes a back seat. Unfortunately, in this context we rarely examine the benefits of an ambulatory health-care model that emphasizes prevention and patient education as essential components of medical services. The most disastrous consequence of this educational system is the fact that service to society through volunteer work and community projects is perceived by faculty as a detraction from a student's education rather than an integral part of reinforcing professional values.

The profession of medicine rests on a commitment to excellence, service to the community and creativity. The ability to foster and maintain these values in the future, however, will be increasingly difficult as the practice of medicine moves into the marketplace where medical services are exchanged as goods and the human component is diminished. It is imperative that students push medicine to a new system of thought, a system based on attention to people, not technology and medical products. The strength of AMSA, as the early founders knew, rests on how deeply we seek equity in health care and how much of a personal risk we will take to uphold true professional values. As empowered leaders of our profession we must reassert our commitment to activism and service, a willingness to work within a political system as advocates of quality patient care and free access to the health-care system.

As your newly elected AMSA president I hope to live the mission of the AMSA in my professional and public role as a physician and I encourage you to join me. We can make a difference if we work together and stand united as advocates for change.

*AMSA President, Duke University

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Infant Feeding Practices in Hawaii

Edith K. Suganuma, MPH*
Greg R. Alexander, MPH, ScD**
Gigliola Baruffi, MD, MPH*
Susan R. Gilden, BA**

Information on infant-feeding methods, related issues (infant-feeding problems and information sources) and demographic characteristics (age, race, parity, education) were solicited in 1984 from a random sample of Oahu, Hawaii, women, using a mailed questionnaire. Although basically similar demographically to the Oahu population of women delivering in 1983, the 562 respondents had a notably higher proportion of college-educated women.

At hospital discharge, 57.5% reported exclusively breast-feeding their infants, with 23.5% bottle-feeding and 19% bottle- and breast-feeding. Filipinas reported the lowest level of exclusive breast-feeding (33%); Caucasians reported the highest proportion of breast-feeding exclusively (70.4%).

Women with more than a high-school education were more likely to breast-feed than less-educated women. Those women choosing their method of feeding prior to delivery were more likely to breast-feed (over 60%) compared to those choosing at delivery (8%). Of those who breast-fed, over 50% reported feeding-related problems.

Introduction

Although trends in infant-feeding practices in the United States have drawn considerable research attention,[1-7] current information on infant-feeding patterns among women in the multiethnic milieu of Hawaii is scanty. A previous research report[8], utilizing sample data from the late 1960s, indicated a 25% incidence of breast-feeding in Hawaii.

That report further documented marked ethnic variations in infant-feeding patterns but concluded that infant-feeding practices in Hawaii were consistent with the national patterns. In the intervening years, breast-feeding has increased sharply in the United States as a whole; at the same time the ethnic composition of the State of Hawaii has undergone continual change.

In order to provide updated information on infant-feeding practices among Hawaii's ethnic populations, a recent survey of postpartum women was undertaken on Oahu. The present study reports the results of that investigation. Information on infant-feeding preferences by sociodemographic groups is provided along with an assessment of reported infant-feeding problems and reported sources of information about infant feeding.

Methods

In October 1984, a questionnaire on infant-feeding practices was mailed to a random sample of postpartum women residing on Oahu. The sample included both the civilian and military population of women who had given birth between March 1983 and March 1984.

The questionnaire solicited information on: Various sociodemographic characteristics of the respondent, infant-feeding method at hospital discharge, reasons for selecting a particular feeding method, the time period when the feeding choice was made, the presence and type of problems experienced with feeding, and the infant-feeding information and support sources utilized. Infant-feeding at hospital discharge was classified for purposes of this study as breast only, as bottle only, or as a mixed combination of breast- and bottle-feeding.

The 562 respondents to the survey represented 35% of those to whom the questionnaire was mailed. However, the demographic characteristics of the respondents compared favorably to those of all women giving birth on Oahu in 1983, with the expected major exception of level of maternal education.[9] The survey respondents included a notably higher proportion (18%) of college-educated women than the 1983 maternity population and demonstrated slightly lower proportions of women who were multiparous, under age 25, or Filipino.

Results

The demographic characteristics of the respondents to the survey are detailed in Table I. Caucasians comprised nearly 40% of the study group, followed in order of proportion by Hawaiians and mixed-Hawaiians (20.3%), Japanese (13.2%), Filipinos (10.1%), and others. Over 60% of the respondents were 25 years of age or older. Further, approximately 60% were multiparous and 60% indicated more than 12 years of education. Kapiolani Hospital (KWCMC) was indicated as the hospital of delivery for over 50% of the study group.

Accepted for publication October 1987

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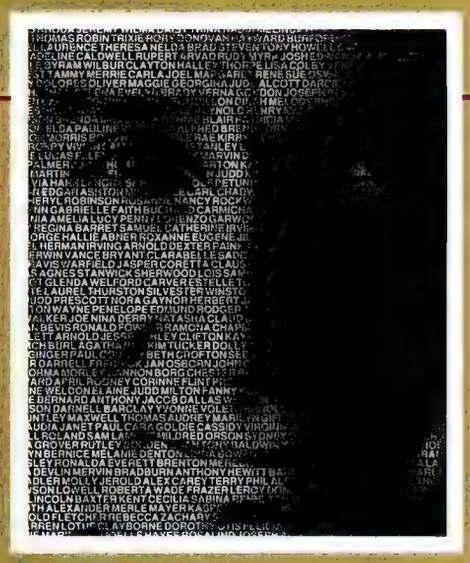
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This study was supported in part by Hawaii Mother's Milk Inc.

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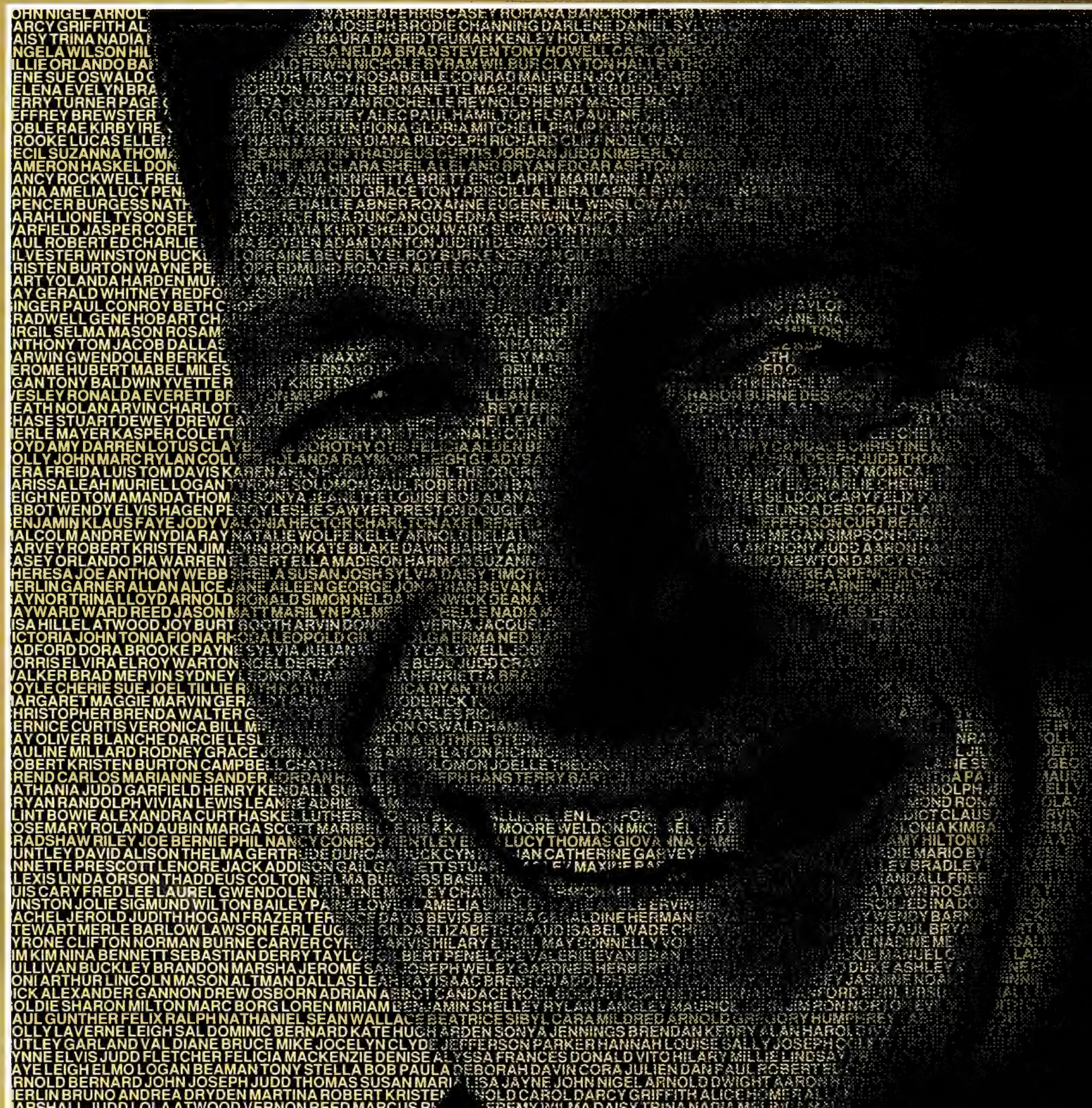
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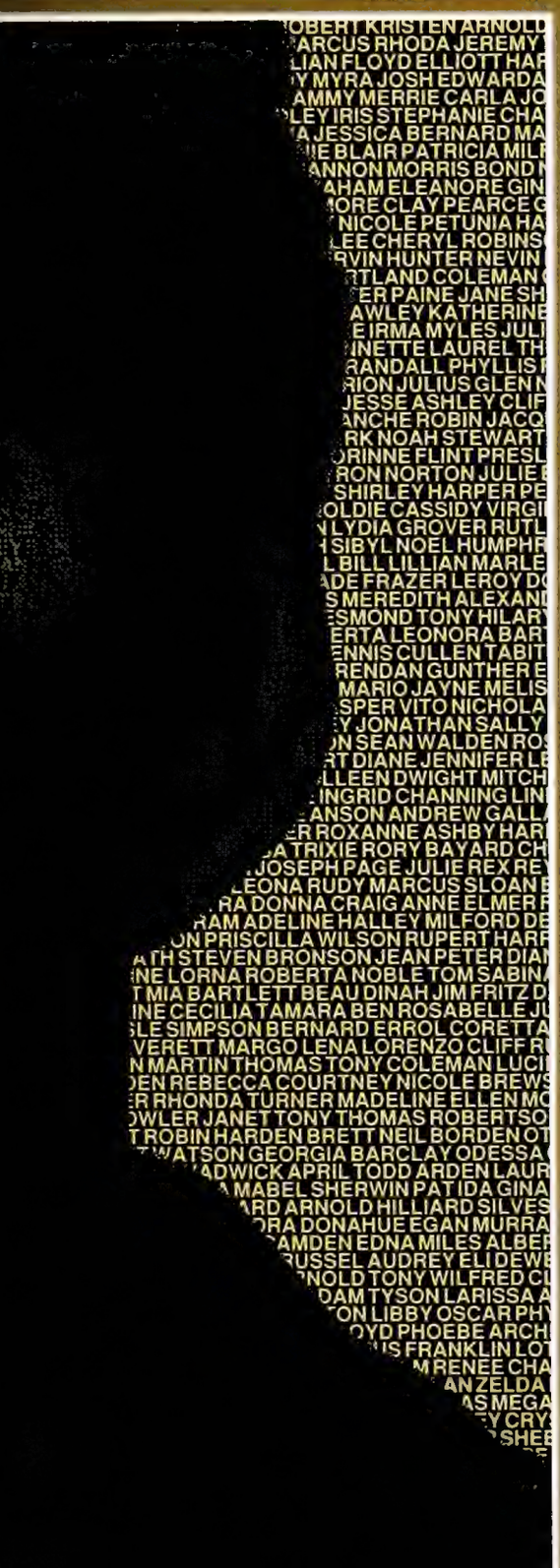
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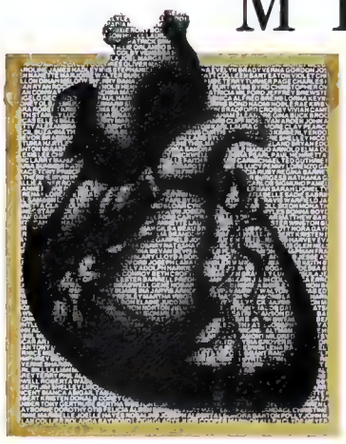
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

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INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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Reference:

1. Data on file, Ayerst Laboratories.

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TABLE I

DISTRIBUTION OF SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

1984 MAILED SURVEY OF POSTPARTUM WOMEN, OAHU, HAWAII

	N (Number)	% (Percent)
Ethnic Group		
Caucasian	213	37.9
Filipino	57	10.1
Hawaiian	114	20.3
Japanese	74	13.2
Other	103	18.3
Missing	1	0.2
Age		
Under 24	185	32.9
25-29	191	34.0
30 +	184	32.7
Missing	2	0.4
Parity		
1	231	41.1
2 +	330	58.7
Missing	1	0.2
Education		
LE 12 yrs.	220	39.1
GT 12 yrs.	339	60.3
Missing	3	0.5
Hospital of Delivery		
KWCMC	285	50.7
Tripler	113	20.1
Kaiser	76	13.5
Wahiawa	34	6.0
Castle	26	4.6
Queens	14	2.5
Other/Unknown	14	2.5
Total	562	100.0

The distribution of reported method of infant feeding at hospital discharge by sociodemographic characteristics is provided in Table II. Of the total sample, 57.5% reported exclusively breast-feeding their infant while 19% reported exclusive bottle-feeding and 23.5% reported mixed-feeding.

The incidence of breast-feeding exclusively was highest in the Caucasian group (70.4%) and lowest in the Filipino group (33.3%). Within the "other" ethnic category over 71% of Chinese women reported breast-feeding exclusively, although their small number in this sample precluded further disaggregated analysis of their infant-feeding practices.

Nearly 63% of women with greater than 12 years of education reported breast-feeding exclusively and less than 14% reported bottle-feeding. Approximately 73% of women with a high-school education or less reported only breast- (50.5%) or mixed breast- and bottle-feeding (22.3%).

In 1980, national estimates of the percentage of infants ever breast-fed were 72% of mothers with more than a high-school education and 48% of mothers with a high-school education or less.[3]

Little appreciable variation in infant-feeding practices was exhibited on the basis of parity. In the age-of-mother category, nearly one-quarter of the youngest age group ($\leq$24 years of age) reported bottle-feeding exclusively while the 25 to 29 years of age group displayed the highest proportion of only breast-feeding (59.7%).

TABLE II

METHOD OF FEEDING AT HOSPITAL DISCHARGE BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

1984 MAILED SURVEY OF POSTPARTUM WOMEN, OAHU, HAWAII

	Breast Only # (%)	Mixed Breast And Bottle # (%)	Bottle Only # (%)
Total	323 (57.5)	132 (23.5)	107 (19.0)
Ethnic Group			
Caucasian	150 (70.4)	24 (11.3)	39 (18.3)
Hawaiian	60 (52.6)	33 (28.9)	21 (18.4)
Japanese	41 (55.4)	24 (32.4)	9 (12.2)
Filipino	19 (33.3)	23 (40.4)	15 (26.3)
Other	53 (51.5)	27 (26.2)	23 (22.3)
	$X^2 = 42.1$ $p < .001$		
Education			
LE 12 yrs.	111 (50.5)	49 (22.3)	60 (27.3)
GT 12 yrs.	212 (62.5)	81 (23.9)	46 (13.6)
	$X^2 = 16.7$ $p < .001$		
Parity			
1	135 (58.4)	59 (25.5)	37 (16.0)
2 +	188 (57.0)	72 (21.8)	70 (21.2)
	$X^2 = 2.8$ $p = .25$		
Age			
LE 24	101 (54.6)	37 (20.0)	47 (25.4)
25-29	114 (59.7)	54 (28.3)	23 (12.0)
30 +	107 (58.2)	40 (21.7)	37 (20.1)
	$X^2 = 12.4$ $p < .05$		
Time of Feeding Decision			
Pre-Preg.	218 (66.3)	67 (20.4)	44 (13.4)
During Preg.	97 (59.9)	31 (19.1)	34 (21.0)
Post-Preg.	5 (7.6)	33 (50.0)	28 (42.4)
	$X^2 = 80.4$ $p < .001$		

Two-thirds of women who reported choosing their infant-feeding method prior to pregnancy indicated only breast-feeding. Those who reported a postpartum decision, about which infant-feeding method to use, mainly mixed-fed (50%) or bottle-fed (47.4%).

Table III displays the distribution of types of problems reported by the 455 women who breast- or mixed-fed at the time of hospital discharge. No problems with feeding were reported by 46.2% of these women, while the majority reported one or more problems. Sore nipples was the most often reported prob-

TABLE III

DISTRIBUTION OF TYPES OF PROBLEMS REPORTED BY 455 WOMEN WHO BREAST OR MIXED FED AT TIME OF HOSPITAL DISCHARGE

1984 MAILED SURVEY OF POSTPARTUM WOMEN, OAHU, HAWAII

Type of Problem	N (Number)	% (Percent)
No Problems	210	46.2
Sore Nipples	157	34.5
Not Enough Milk	107	23.5
Work	86	18.9
Engorged Nipples	67	14.7
Baby Refused Breast	46	10.1
Breast Infection	29	6.5
Mother Sick	24	5.3
Plugged Ducts	21	4.6
No Help	21	4.6
Taking Medication	20	4.4
Inverted Nipples	17	3.7
Baby Sick	12	2.6
Family Against It	11	2.4
Other	27	5.9

lem (34.5%), followed by not enough milk (23.5%). Difficulties related to working and infant-feeding practices were reported by 19% of this group.

The various sources of information on infant feeding used by the survey respondents are listed in Table IV. Multiple sources of information were commonly reported and these categories of sources are not mutually exclusive. Books and pamphlets were used by the majority of the women, as was the mother's doctor. Approximately 40% of the respondents obtained information on infant feeding from family and friends.

TABLE IV

DISTRIBUTION OF INFANT FEEDING INFORMATION SOURCES

1984 MAILED SURVEY OF POSTPARUM WOMEN, OAHU, HAWAII

	N (Number)	% (Percent)
Books	298	53.0
Pamphlets	295	52.5
Mother's Doctor	287	51.1
Baby's Doctor	248	44.1
Family Members	240	42.7
Prenatal Classes	232	41.3
Friend(s)	223	39.7
Magazines	196	34.9
Hospital Nurse	191	34.0
La Leche League	79	14.1
Office Nurse	38	6.8
Public Health Nurse	37	6.6
Newspaper	31	5.5
Hawaii Mother's Milk, Inc.	27	4.8
Dietician	15	2.7

Discussion

Compared to early reports of infant-feeding patterns in Hawaii[10] the present study would indicate a substantial increase over the last two decades in the proportion of women in Hawaii who elect to breast-feed their newborn infants. This change is in keeping with national trends over the same period. Taking into account the limitations of this sample, these data further suggest that the incidence of breast-feeding in Hawaii may well exceed national levels.

Infant-feeding patterns varied considerably by ethnic group. Although education certainly explains part of these ethnic variations, previous research has indicated that ethnic differences in breast-feeding persist even after taking into account educational disparities.[3]

The need for research on cultural and ethnic differences in infant-feeding practice has been recognized nationally[4] and these data from Hawaii highlight the importance of continuing investigations focused on the detection of factors underlying these observed levels of breast-feeding among Hawaii's ethnic populations.

Over 50% of women who breast-feed their infants reported problems. A natural consequence of the lack of encouragement to continue to breast-feed is the mother's substitution of formula and/or the early termination of breast-feeding altogether. Failure in breast-feeding one's first-born may also affect infant-feeding practiced on subsequent newborns.

What is promoted as a healthy beginning for mother and infant may become an unpleasant experience for both. As many of the reported feeding problems are preventable by anticipatory guidance, support and assistance at early feedings, practitioners can intervene directly or by way of referral in order to improve a woman's prospect of breast-feeding successfully.

Beliefs that breast-feeding and work outside the home are incompatible with each other may often be responsible for a decision not to begin breast-feeding, or for the initiation of mixed-feeding during the early days of the infant's life. However, many women combine working and breast-feeding and find the combination to be manageable. The critical element for success is the establishment of a full milk supply, a process that is aided by exclusive and frequent breast-feeding during the first weeks after delivery.[10] Subsequently, a mother who is returning to her job may provide for her infant during working hours with pumped breast milk or purchased formula, and nurse when she is at home.

The reported problem of insufficient milk may often be traced to a non-physiologic origin. Lack of knowledge about the physiology of lactation, misinterpretation of infant-feeding behavior and lack of confidence in breast-feeding by the mother, her family and her friends, may contribute to a cycle of events leading to an insufficient milk supply.[11] If there is a belief that there is an insufficient amount of breast milk for the infant's needs, the usual response is to supplement the infant's diet with a few bottles of formula. This leads to inadequate sucking stimulation of the mother's breasts by the baby and, ultimately, to the reality of insufficient breast milk.

Successful breast-feeding generally follows the basic economic principle that increased demand results in an increased supply (in this case with no intermediate rise in cost). When the infant's needs increase beyond the mother's supply, the infant will respond by wanting to suck more frequently. After a day or two of increased sucking, the mother's supply of milk should naturally increase to meet the infant's demands and needs, and the frequency of the infant's nursing will usually stabilize thereafter.

The major problem reported by breast-feeding mothers was sore nipples. This problem is largely preventable through the use of proper positioning and the encouragement of frequent nurs-

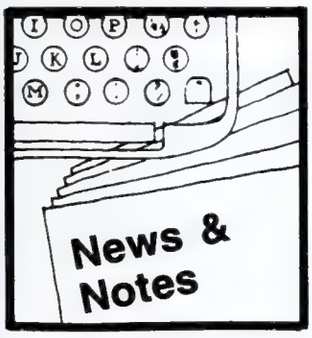
ing to avoid distended breasts and ravenous sucking behavior on the part of the infant. The infant's stomach should be facing the mother's stomach and the infant's lips should be compressing as much of the areola as possible, as opposed to sucking the nipple as it would with a bottle.

Limiting the amount of nursing time during the early postpartum period is not effective in preventing sore nipples and may, in fact, exacerbate the problem.[13]

The physician represented a major source of information about infant feeding to these respondents. Additionally, the practitioner can guide the mother to additional information by providing and recommending appropriate literature. Infant-feeding information suitable to offer to patients who are deciding on a feeding method, or having problems with feeding, can be obtained from the State Health Department or from the Hawaii Healthy Mothers, Healthy Babies Coalition, an alliance of public and private agencies dedicated to promoting the health of mothers and children. These agencies can further assist the mother in locating support groups to aid her in the care and feeding of her infant.

REFERENCES

1. Arango JO: Promoting Breast Feeding: A National Perspective. *Pub Hlth Rep:* 99(6):559-565, 1984.
2. Hendershot GE: Trends in Breast Feeding, Advance Data from Vital and Health Statistics of the National Center for Health Statistics, No 59, March 28, 1980.
3. Hendershot GE: Trends in Breast Feeding. *Pediatrics:* 74(4):591-602, 1984.
4. Koop CE and Brannon ME: Breast Feeding — The Community Norm. *Pub Hlth Rep:* 99(6):550-558, 1984.
5. Martinez GA: Trends in Breast Feeding in the United States, Report of the Surgeon General's Workshop on Breast Feeding and Human Lactation. Dept. of Health and Human Services, U.S. Public Health Services, 18-22, 1984.
6. Martinez GA and Dodd DA: 1981 Milk Feeding Patterns in the United States During the First 12 Months of Life. *Pediatrics:* 71(2):166-170, 1983.
7. Simpopoulos AP and Grave GD: Factors Associated with the Choice and Duration of Infant Feeding Practice; Report of the Task Force on the Assessment of the Scientific Evidence Relating to Infant Feeding Practices and Infant Health. *Pediatrics:* 74(4):606-604, 1984.
8. Brown ML and Adelson S: Infant Feeding Practices Among Low and Middle Income Families in Honolulu. *Trop Geog Med:* 21:53-61, 1969.
9. Statistical Report, Office of Research and Statistics, Hawaii State Health Department, Honolulu, Hawaii, 1983.
10. Frederick IB and Auerback KG: Maternal-Infant Separation and Breast Feeding: The Return to Work or School. *J Repro Med:* 30(7):523-526, 1985.
11. Ferris AM, McCabe LT, Allen LH and Pelto GH: Biological and Socio-Cultural Determinants of Successful Lactation Among Women in Eastern Connecticut. *J Am Diet Assn:* 87(3):316-321, 1987.
12. Feinstein JM, Berkelhamer JE, Gruszka ME, et al: Factors Related to Early Termination of Breast Feeding in an Urban Population. *Pediatrics:* 78(2):210-215, 1986.
13. L'Esperance C and Frantz K: Time Limitations for Early Breast Feeding. *J Obstet Gyn Neonat Nurs:* 14(2):114-118, 1985.



HENRY YOKOYAMA, MD

Life In These Parts . . .

We hadn't seen Jim Stewart since his inspiring tribute to Charley Judd at the QMC Harkness Pavilion services . . . "I wonder if you have a copy of your talk?" we asked . . . "I didn't have a speech written . . . Just some notes . . .," Jim said . . . "We certainly miss him, don't we?" we said . . . "Sometimes we miss people like Charley only after they're gone," Jim said . . . "Too bad we can't tell them how great they are before they're gone," we both thought.

An early '70s model green Plymouth sedan with smashed left rear light and fender had the following bumper stickers: "EASY DOES IT!" and "CAUTION! EXPLOSIVE TEMPER" . . . But alas! . . . the stickers had not warded off the rear-ender.

Joe Semak, the ortho rep, was in several years ago and said, "Norm, don't *speculate* . . . Use *Spectazole* . . . Last week Joe came in and said, "I have some *foot notes* for you" and took out the Spectazole *scratch pad* . . . (Submitted by our friendly dermatologist Norman Goldstein . . .)

Rehab Hospital medical director Gary Okamoto announced the full-time appointments of physiatrist David Sheetz, physiatrist William Ellis, internist George Vellucci and internist Kim Lee . . . David had recently completed his residency at Johns Hopkins University/Sinai Hospital and William at New York University Medical Center. George and Kim both completed the integrated internal residency program at U of Hawaii. . . .

Elected, Honored & Appointed

Jim Lumeng, pathologist, oncologist and internist at St. Francis Hospital, was installed as HMA president at its annual meeting at the Kauai Hilton in October. Jim wears other hats as well, including VP of the SFH medical staff, and associate professor of pathology at the UH School of Medicine. Allan Kunimoto is president-elect; John McDonnell, treasurer; John Kim, secretary. Calvin Kam is AMA delegate; Richard Ando, speaker of the House and Herbert Uemura, vice speaker. . . .

Fred Gilbert Jr., executive director of the Pacific Health Research Institute, was named "Hawaii Physician of the Year" at the HMA's 131st annual meeting . . . (We cannot think of anyone more deserving of the honor. . . .)

Hunky Chun, Honolulu cardiologist, was accepted as a Fellow of the American College of Utilization Review Physicians. . . .

The Hawaii Medical Library has re-elected Norman Goldstein president; and elected James Linman, second vice president; Ann Catts, secretary; and Lynn Rayner member of the Board of Governors.

"Make A Wish, Hawaii" has on its board of directors Jeanette Chang, Bruce Cook and Robert Wilkinson. . . .

The Journal of the American Academy of Child and Adolescent Psychiatry moved its editorial office from Yale University to the University of Hawaii when UH School of Medicine's John McDermott Jr. was elected journal editor. . . .

(Continued on page 122)

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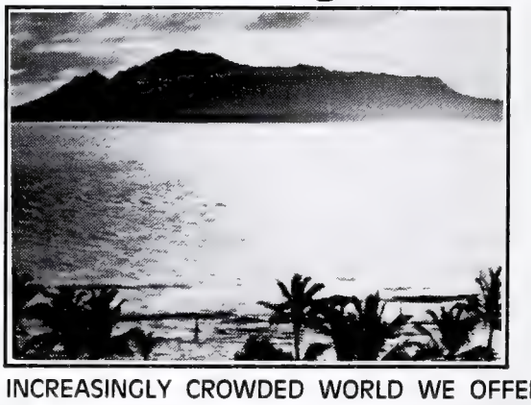


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Marc Coel, director of Nuclear Med at QMC, was one of four radiologists nationwide invited by the University of Beijing to share U.S. technology with the Chinese. . . .

Wallace Chong was installed as president of the Hawaii Unit, American Cancer Society . . . James Lumeng, HMA president, was named chairman of the Governor's Committee on AIDS. . . .

The American Cancer Society, Hawaii Pacific Division, elected Drake Will, chairman; John Hardman, president; and Reginald Ho one of the national delegates. . . .

Life in These Parts . . .

Jeff Nakamura, associate professor of medicine at the UH School of Medicine and director of medical education at KMC, has been conducting research on HTLV-1, a virus which can cause T-cell leukemia (ATL) . . . Jeff estimates that perhaps 10,000 residents of Japanese ancestry in Hawaii carry the virus and that 1% of these people may develop adult T-cell leukemia during their lifetime. Thus far, nine cases have been diagnosed in the state and an additional 30 to 40 cases will be diagnosed in the next 10 years, compared to 300 cases in all of Japan as of last July. In the past, the HTLV-1 virus was passed slowly from mother to child, but more recent research in Japan and Hawaii indicates the virus has been transmitted in blood transfusions . . . There is some evidence of sexual transmission through semen . . . Some experts argue that the disease is so rare and the screening test so new, that massive screening in blood banks or in the general population is unwarranted. Robert Gallo of the National Cancer Institute, who first isolated the virus from two leukemia patients in 1978, thinks that a blood test for the virus should be developed for regular screening of blood supplies. Jeff agrees: "If this virus is not contained and suppose, for example, that the entire population of the U.S. is eventually infected, 1% would develop ATL, which equals 2 million people." Jeff is confident that the virus can be contained and that a vaccine will be developed.

Max Botticelli, director of Queen Emma Clinic, and John Linman, director of medical education at QMC, run an outpatient clinic that is open Saturdays from 9 a.m. to noon at the Institute for Human Services (IHS). The staff physicians are 10 senior medical students who are members of Alpha Omega Alpha, the national medical honor society . . ." Sister Maureen Keleher, director of St. Francis Hospital, donated the examination table and most of the supplies and equipment to get it started," says Rev. Claude duTeil, IHS director. . . .

We were happy to learn that Scott McCaffrey has returned safely to the Kaiser Emergency room with a beard he'd grown for warmth during three weeks as part of a Mount Everest expedition. (Don Chapman's column, The Honolulu Advertiser, Oct. 30)

In November, a potentially serious birth at the Waianae Coast Comprehensive Health Center was worked out happily when a KWCMC Neonatal Transport Team (physician, RN and respiratory therapist) was flown in by the Air Force's 68th Medical detachment helicopter . . . Both mother and the infant (in an incubator) were flown back to KWCMC. . . .

"Expect another Harlequin novel from Dr. Terry 'Tess' Tom Geritsen of Kaiser. Her first, 'Call After Midnight,' is all but sold out of local books shops." (Don Chapman's column, The Honolulu Advertiser, Nov. 9)

The Hawaii State Department of Health received a federal grant of $493,940 to establish special medical facilities for pediatric emergencies . . . Sen. Daniel Inouye wrote the legislation and gives special credit to Calvin Sia for preparing the grant application . . . The Hawaii funds will cover a one-year period, with the possibility of future renewals. . . .

Hors de Combat

State Sen. Clayton Hee, who chairs the Senate Judiciary Committee, feels that a solution to the soaring medical malpractice rates probably lies in a restructuring of the insurance industry, plus stricter review and disciplining of physicians . . . Physicians, however, feel that the answer lies in tort reform, which would limit monetary damages awarded by the courts and discourage the filing of frivolous lawsuits . . . At a Castle Medical Center meeting with 50 physicians present in October, Kailua plastic surgeon Max Cooper distributed a flier showing political contributions to Hee from lawyers and told Hee: "I hold, sir, that you are not unbiased and should not present yourself as such." Hee replied that he was not a "whipping boy of the attorneys," and "Slice it any way you want, I won't apologize for people giving me money." Hee refers to a Florida study showing that 3% to 4% of physicians account for 50% of the state's malpractice awards. Dermatologist Philip Hellreich, president of the Hawaii Federation of Physicians and Dentists, said, "Even if you got rid of all the bad doctors, it wouldn't have any effect on your premiums. Ten years ago California doctors paid higher premiums than Hawaii doctors, but now we pay 40 percent more . . . The only difference is tort reform . . . Physicians want the injured party to be compensated . . . What we want is a cap on all non-economic losses." Hawaii's 1986 tort reform places a $375,000 cap on pain and suffering damages, but a plaintiff can collect on other non-economic losses.

The American Cancer Society recommends that women between 35 and 40 get an initial mammogram, and between ages 40 and 50, a mammogram every two years, with annual mammograms after age 50. Fred Gilbert, chairman of the Breast Cancer Task Force of the Cancer Society's Hawaii Division, says, "There is no way the existing medical care system could deal with the impact of this increase. Shifting the costs to insurance or welfare programs is obviously not the answer." Fred feels that even for women over 50, a screening mammogram every two years, rather than annually, is adequate because cancers in older women are slower growing and can be caught in time with less frequent testing.

Oncology Conference

A 65-year-old Oriental woman who was treated for intraductal Ca of her breast in 1966, was seen by oncologist Gordon Nakano for pelvic pain. Work-up revealed a colon tumor which, when resected, was Duke's C . . . Ed Quinlan reported that bone scans showed her body riddled with mets . . . Pathologist Larry McCarthy projected slides that proved that the pelvic bone lesion was identical with the 1966 breast Ca . . . Moderator Glenn Kokame had researched the relation of colon and breast Ca in terms of risk factors: "Breast Ca has a 2.1 risk factor for developing in the other breast . . . Breast Ca has a 2.0 risk factor for developing colon Ca . . . Colon Ca has a 1.7 risk factor for developing a second colon lesion," Glenn intoned . . . Turning to pathologist-emeritus Grant Stemmerman, Glenn asked, "Are the same carcinogenic factors operating?" We were astonished to hear Stemmy reply, "I don't know . . ." But he elucidated another critical point: "John Heywood, who was the first to recommend lumpectomy, reported in the recent Archives of Surgery that patients who had radical surgery have a better survival record at 20 years . . ." Glenn injected, "That means the cells were there and survived all those years . . ." He turned to Gordon: "What do you plan for chemotherapy? . . ." Gordon replied, "We can assume that there is no residual of the resected colon Ca so no adjuvant therapy is needed . . . The bone lesions will be treated with Tomoxifen . . ." Stemmy added yet another gem: "There is no question that families with breast Ca have a high risk for colon Ca and vice versa. . . ."

Medical News

(Gleaned from the Playboy Forum) "Boston: When it comes to sperms, it's not the quantity but the quality that counts. Fertility researchers at the U of Massachusetts have decided that quality refers to the speed at which sperms travel. If sufficient speed — at least 20 microns per second — is present, pregnancy can result even when the sperm count is low. The velocity of sperm can be increased by a relatively simple procedure that involves mechanically agitating the little fellows. A woman can be artificially inseminated with them at the appropriate time in her cycle. The success rate is 30% and no abnormalities in such pregnancies have been noted. . . ."

"Preliminary findings by researchers at the U of Washington and U of Michigan indicate that drinking habits of fathers may affect their offsprings' health. In a major study of paternal drinking and infant birth-weights, the Seattle group found, to its surprise, that infants of drinking fathers weighed 6.5 ounces less than other infants, regardless of whether the mother drank or smoked. . . ."

Dr. Mom

Margaret Levy, MD*

I am not a liberated woman. I am incarcerated in a world and lifestyle far more complex and complicated than my great-grandmother (raising her 11 children in an apartment in the Bronx) could have imagined. I don't care whether I am addressed as Miss, Mrs., Ms., doctor, nurse, chairman, chairperson, sir, ma'am, or hey-there. I used to become very angry when patients would call out to me, "Hey, nurse, I need a bedpan." It's far easier just to give them a bedpan.

When I was a medical student, I was naive enough to believe that I could do everything I wanted to do. I had no role model. Yes, I knew women who were physicians, even a couple of whom were surgeons. But these people were aberrations to me — unhappy, unbalanced, androgynous, and often downright hostile. Now that a decade has passed since I graduated from medical school, I realize how impossible it is not to be one among them. It is a continuous struggle not to be. I admire those women who have totally dedicated themselves to their careers. You all know such women. Take a look at them. Now think of your male colleagues who have made major contributions in their fields, or think of those whom we label as workaholics. Notice any difference? Of course. Even the most dedicated of your male colleagues goes home to a wife and family.

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Now comes the women who thinks she can have a rewarding career in medicine and — at the same time — raise a family. Let me tell you, once and for all, that this is neither physically nor psychologically possible. The myth is that a woman engaged in a rewarding career — in any profession — can raise her children. Take my word for it, someone else is, call it Grandma, au pair girl, or day care, call it anything but Mom. Okay, so maybe she is doing it part time — part-time Mom and part-time doc. Now her peers don't respect her (she just isn't dedicated enough) and her kids are confused and she is exhausted and angry and feels like she is copping out. Riddled with guilt lest her patients need her and she is home watching "Sesame Street" or it is Josh's first day in kindergarten and she is stuck at the hospital with a sick patient.

I have discussed these issues with dozens of women in our profession. The solution in my family has been for my husband to suspend his career to be a full-time parent so that I can be a full-time surgeon. The result of this is that I have two beautiful sons who have a unique world view (I remember when Michael was all of 3, he asked me if men could be doctors, too!). I am envious of all of the time my husband has had with the kids, and he is now struggling to get back into a career track after having been out of the "real world" for eight years. Our choice was made out of the dismay we both felt when seeing our friends' "day-care kids," who are absolutely pathetic, no matter how good the day care is. In addition, we had invested too much money in my career and realistically could anticipate — at least financially — a better lifestyle with me as the breadwinner. Not to mention that sometimes I really do love my work.

Our solution is a rather unusual one, but I have found what I have in common with my female colleagues — being in a constant state of exhaustion and frustration. If any of you out there have fared better, I would like to hear from you.

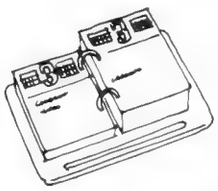
HMA Committee Reports

The Aug. 27 meeting of the **Chronic Illness and Aging Committee** was devoted largely to the reports by Jane Van Schaik from the Alzheimer's Disease and Related Disorders Association (ADRDA).

She noted that there are about 10,000 people with this condition in Hawaii and that the Honolulu Chapter tries to support families through support groups, monthly educational meetings, speaker's bureau, monthly newsletters, library (open to public), Respite (funded by the State to provide volunteers to relieve primary caregivers), and recreational programs, i.e. Shepard Center, providing half-day sessions for Alzheimer's Disease participants.

It was also noted that physicians should be aware of caregivers' emotional and physical burdens. Patients tend to be nocturnal and are wanderers. ADRDA also supports families of patients with mental dysfunctions and memory impairments.

Samuel Allison MD



Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS — CATEGORY 1

Accredited programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Asterisked programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS
ONGOING

American Cancer Society, Hawaii Pacific Division Inc.

1. Skin Tumor Conference, first Friday, 12:30-1:30 p.m., Queen's University Tower, Room 508.

John A. Burns School of Medicine

1. Department of Medicine
   - *A. Case Conferences, second and fourth Tuesdays, 12:30-2 p.m., Queen's University Tower, Room 618.
   - *B. Grand Rounds, first and third Tuesdays, 12:30-2 p.m., Queen's University Tower, Room 618.
   - C. Endocrinology Grand Rounds, first Tuesday, 5:30-6:30 p.m., Queen's University Tower, Room 506.
   - D. UH-Queen's Conference, every Friday, 8-9 a.m., Queen's Medical Center, Mabel Smyth Auditorium.
   - E. Cardiology Grand Rounds, third Tuesday, 6:30-7:30 p.m., Queen's University Tower, Room 508.
   - F. Infectious Disease Grand Rounds, first and third Thursdays, 5 - 6 p.m., Queen's Nalani I Conference Room.
   - G. Dermatology Grand Rounds, second Wednesday, 7:30-9:30 a.m., Queen's Medical Center, Queen Emma Clinic.
   - H. Pulmonary Grand Rounds, fourth Monday, 12:30-1:30 p.m., Queen's Medical Center, Kamehameha Lounge.
   - I. Nuclear Medicine Grand Rounds, third Wednesday, 5-6:30 p.m., Straub Clinic & Hospital, Doctors' Dining Room.
   - J. Medical-Surgical GI Grand Rounds, third Friday, 12:45-1:45 p.m., Kuakini Hospital, PB4 Classroom.
   - K. Rehabilitation Hospital of the Pacific Grand Rounds, first and third Thursdays, 7:30 - 8:30 a.m., Rehabilitation Conference Room, first floor.
   - L. Neurology Grand Rounds, second Thursday, 12:30-1:30 p.m., Queen's Medical Center, Kam Auditorium.
2. Department of Obstetrics and Gynecology
   - *A. Grand Rounds, Wednesdays, 7:30-8:30 a.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - B. Tuesday Conference, Tuesdays, 1-2 p.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
3. Division of Orthopedics
   - A. Fracture Conference, Mondays, 5-6 p.m., Queen's University Tower, Room 618.
   - B. Shriners' Tuesday Conference, Tuesdays, 7:15-8:15 a.m., Shriners Children's Hospital, Auditorium.
4. Department of Pediatrics
   - A. Grand Rounds, Thursdays, 8-9 a.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - B. Monday Noon Conference, 12:45-1:45 p.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - C. Pediatric Infectious Disease Conference, Thursdays, 12:30-1:30 p.m., Kapiolani Medical Center for Women and Children, third-floor conference room.
   - D. Perinatal Grand Rounds, Fridays, 8:15-9:15 a.m., Kapiolani Medical Center for Women and Children, Conference Room B.
5. Department of Psychiatry
   - A. Grand Rounds, Fridays, 8-9:30 a.m., Queen's University Tower, Room 618.
   - B. Scientific Forum, Mondays, 12:30-2 p.m., Kapiolani Medical Center for Women and Children, Conference Room 626.
   - C. Hawaii State Hospital Psychiatry Education Conference, third Wednesday, 10:30 a.m.-noon, Hawaii State Hospital, Goddard Conference Room.
6. Department of Surgery
   - A. Grand Rounds, first, second, and third Saturdays, 7:30-9 a.m., rotating hospitals.
   - B. Statistical M&M, last Saturday, 7:30-9 a.m., rotating hospitals.
   - C. Journal Club, first and third Tuesdays, 6-8 p.m., Queen's University Tower, Rom 620.
   - D. Medical-Surgical GI Grand Rounds, third Friday, 12:45-1:45 p.m., Kuakini Medical Center, PB4 Classroom.
   - E. Pediatric Surgical Grand Rounds, first Friday, 12:45-1:45 p.m., Kapiolani Medical Center for Women and Children, Conference Room B.
   - F. Basic Science Lecture, Wednesdays, 7:15-8:15 a.m., Queen's University Tower, Room 618.
7. Department of Pathology
   - A. Neuropathology Conference, first Saturday, 8-9 a.m., St. Francis Hospital, Sullivan IV Classroom.

For further information on any of these programs, please call the Continuing Medical Education office at 948-6949.

Castle Medical Center

1. CME Programs, first and third Tuesdays, 12:30-1:30 p.m., Castle Medical Center's auditorium.
2. Windward Oncology Programs, second and fourth Tuesdays, 12:30-1:30 p.m., Castle Medical Center's auditorium.

For further information, call Staff Development at 263-5186.

Chart

1. CME Programs, Thursdays, 8-9 a.m. Topics and visiting professorships to be announced.

For further information, or to be placed on the mailing list, contact Comprehensive Health and Rehabilitation Training (CHART) at 523-1674.

G.N. Wilcox Memorial Hospital

1. General Medical Staff Meeting, Quarterly in January, April, July, and October, 7:30 p.m., Hospital Conference Room.
2. Clinical Review, Mondays (occasional Friday), noon-2 p.m., Hospital Conference Room.
3. Journal Club, last Monday, bimonthly (January, March, etc.), Hospital Conference Room.

For further information, call Medical Staff Services, 245-1173.

Hawaii Medical Association

1. HMA Maternal and Perinatal Mortality Study Committee, Monday, 5:30 p.m., on an on-call basis. 320 Ward Ave., Suite 200, Cat. 1 on hr. for hr. basis. (Call 536-7702 to confirm meeting schedule.)

Hawaii Ophthalmological Society

1. Monthly Dinner Meeting, third Thursday of each month (except July, August, and December), 6:30-9:30 p.m., The Pacific Club.

Hawaii Thoracic Society

1. To be announced — Visiting Professorship Program Statewide.
2. Sinclair Chest Club Quarterly Dinner Meetings, January, April, July, and October. Call Rosemary Respicio, BSN, at 537-5966 for dates and speakers.

Hilo Hospital

1. Radiology Conference, first Friday, 12:30-1:30 p.m., GC-1 Conference Room.
2. Tumor Conference, second Friday, 12:30-1:30 p.m., GC-1 Conference Room.
3. Cardiology Conference/Clinical Department Update for Medical Staff, third Friday, 12:30-1:30 p.m., GC-1 Conference Room.
4. Pathology Conference/Morbidity-Mortality Review, fourth Friday, 12:30-1:30 p.m., GC-1 Conference Room.
5. Visiting Professor/Program/Network for Continuing Medical Education Tapes (ETV), Saturdays, 7-8 a.m., GC-1 Conference Room.

For further information, call Administration at 969-4382.

Kaiser Foundation Hospital

1. Obstetrics/Pathology Conference, first Monday, noon-1 p.m., Moanalua fourth-floor conference room.
2. *Medicine Grand Rounds, Tuesdays, 8-9 a.m., Moanalua Auditorium.
3. Tumor Board, Tuesdays, noon-1 p.m., Moanalua Auditorium.
4. Pathology Conference, Fridays, 7-8 a.m., Moanalua Conference Room A.
5. Surgical Grand Rounds, Fridays, 8-9 a.m., Moanalua Auditorium.

*6. Family Practice Grand Rounds, fourth Thursday, 7:45-9 a.m., Moanalua fourth-floor conference room.

7. Obstetrics/Perinatal Conference, last Tuesday, 8-9 a.m., Moanalua fourth-floor conference room.
8. Network for Continuing Medical Education (NCME) Videotape Program, Monday-Thursday, noon-2 p.m., Moanalua Conference Room C-D.

For further information, call CME Office at 834-9496 for topics.

Kona Hospital

1. Monthly CME Meeting, third Friday, 7:30-8:30 a.m., Hospital Conference Room.
2. Grand Rounds/Tumor Board, third Thursday, 7:30-8:30 a.m., Hospital Conference Room.
3. Visiting Professor Programs, (For further information, call 322-9311 ext. 29 or 55.)

Kuakini Medical Center

1. Visiting Professor Lectures (ongoing).
2. Guest Lectures (ongoing).
3. Neurology Conference, second Monday, 12:30-1:30 p.m., private dining room.
4. Nephrology Conference, third Monday, noon-1 p.m., Resident's Conference Room.
5. Department of Ophthalmology Meeting, first Tuesday, 12:30-1:30 p.m., To be announced.
6. Internal Medicine Study Club, second Tuesday, 6-7 p.m., PB-4 Conference Room.
7. Department of Medicine (M&M), fourth Tuesday, 1-2 p.m., Hale Pulama Mau Auditorium.
8. Endocrinology Conference, first Wednesday, 12:30-1:30 p.m., Resident's Conference Room.
9. G.I. Conference, second Wednesday, 12:30-1:30 p.m., Resident's Conference Room.
10. Infectious Disease Conference, third Wednesday, 12:30-1:30 p.m., Resident's Conference Room.
11. Oncology Conference, Thursdays, 7:30-8:30 a.m., PB-5 Conference Room.
12. Hematology and Oncology Conference, first Thursday, 12:30-1:30 p.m., Resident's Conference Room.
13. Pulmonary Conference, second Thursday, 1-2 p.m., Resident's Conference Room.
14. Rheumatology Conference, third Thursday, 12:30-1:30 p.m., Resident's Conference Room.
15. Cardiology Conference, fourth Thursday, 12:30-1:30 p.m., Resident's Conference Room.
16. Surgical Conference, first Friday, 12:45-1:45 p.m., PB-5 Conference Room, (Note: Also fourth Friday, if there are five Fridays in a month.)
17. Nutrition Conference, second Friday, 12:30-1:30 p.m., Resident's Conference Room.
18. Surgical Trauma Conference, second Friday, 12:45-1:45 p.m., PB-5 Conference Room.
19. Surgical Mortality and Morbidity Conference, last Friday, 12:45-1:45 p.m., PB-5 Conference Room.

Maui Memorial Hospital

1. Department of Medicine, first Thursday, 7-8 a.m., auditorium.
2. Department of Surgery, second Thursday, 7-8 a.m., auditorium.
3. Department of Obstetrics & Gynecology, third Thursday, 7-8 a.m., auditorium.
4. Department of Pediatrics, fourth Thursday, 7-8 a.m., auditorium.
5. Fifth Thursday Meeting: 7-8 a.m., auditorium.
6. Tumor Board Conference; second Friday and fourth Wednesday, 7-8 a.m., multipurpose room.
7. Anesthesia Conference, second Wednesday, 7-8 a.m., dining room.

The Queen's Medical Center

1. Anesthesiology Conference, first and second Wednesdays, 7-8 a.m., Doctors' Conference Room.
2. QMC Cardiology Rounds, Wednesdays, 9-10 a.m., Kam Auditorium.
3. Emergency Medicine Conference, third Tuesday, 11:30-12:30 p.m., Ultrasound Conference Room #1.
4. ENT Conference, first and second Fridays, 7:30-8:30 a.m., Harkness Room 139.
5. QMC-UH Medical Conference, Fridays, 8-9 a.m., Mabel Smyth Auditorium.
6. MICU Lecture, Mondays, Tuesdays, Wednesdays, and Thursdays, 9-10 a.m., Queen Emma Tower, Room 4B.
7. Neuro-Radiology Conference, Mondays, 8-9 a.m., Imaging Services classroom, QET #2.
8. Ob/Gyn Conference, Mondays, 1-2 p.m., Kam Auditorium.
9. Ophthalmology Conference, fourth Tuesday, 4:45-6 p.m., Doctor's Conference Room.
10. Orthopaedic Conference, Wednesdays, 7-8 a.m., Kam Auditorium.
11. Pathology Conference, Wednesdays, 7-8 a.m., Queen Emma Tower, fourth floor.

12. Pediatrics Conference, fourth Thursday, 12:30-1:30 p.m., Harkness Board Room.
13. Surgical Conference, Tuesdays, 4:30-5:30 p.m., Kam Auditorium.
14. Tumor Board Conference, Tuesdays, 7:30-8:30 a.m., Kam Auditorium.

St. Francis Medical Center

1. Oncology Conference, Mondays, 7:30-8:30 a.m., Sullivan IV Classroom.
2. EENT Meeting, first Tuesday, 7:30-8:30 a.m., Sullivan IV Classroom.
3. Surgery Grand Rounds, first, second, and third Fridays, 7:30-8:30 a.m., Sullivan IV Classroom.
4. Medicine Conference, every Thursday, 8-9 a.m., Sullivan IV Classroom (for SFH staff members only).
5. Medico-Legal Conference, every fourth Thursday, 8-9 a.m., L.Q. Pang Auditorium. (Everyone welcome).
6. Hematology Conference, third Thursday, 12:30-1:30 p.m., Sullivan IV Classroom.
7. Visiting Professor Programs (contact Medical Education Office at 547-6497 for further information).

Straub Clinic & Hospital

1. Friday noon Conference, Fridays, 12:30-1:30 p.m., Doctors' Dining Room.
2. Patient Care Conference, second Tuesday, 5-6 p.m., Doctors' Dining Room.
3. Cardiac Surgery Conference, fourth Tuesday, 4:30-5:30 p.m., Doctors' Dining Room.
4. Neuropathology Conference, fourth Saturday, 8-9 a.m., Doctors' Dining Room.
5. Surgical Morbidity and Mortality Conference, fourth Thursday, 7-8 a.m., Doctors' Dining Room.
6. Visiting Professor Conference, variable time throughout the month, Doctors' Dining Room.
7. Diabetes/Endocrinology Conference, first Wednesday, 12:30-1:30 p.m. Diabetes Center Conference Room, Palma 4.
8. Docs-on-Call Conference, third Wednesday, 7-8 p.m., Doctors' Dining Room.
9. Fluorescein Angiography Conference, third Thursday, 4:30-5:45 p.m., First Insurance Building, Room 950.
10. Fronk Clinic Educational Meeting, Variable monthly, 6:30-7:30 p.m., Fronk Clinic.
11. Video Conference, first Thursday, 12:30-1:30 p.m., Doctors' Dining Room.

For further information, call the Office of Professional Activities, 523-2311, ext. 8152.

Wahiawa General Hospital

1. CME Program, Tuesdays, 1-2 p.m., SNF Dining Room. For further information, call the Medical Staff Services Office at 621-8411.

Note: All conferences are subject to change. Monthly calendar is available upon request.

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Compiled by Virginia Tanji of the Hawaii Medical Library

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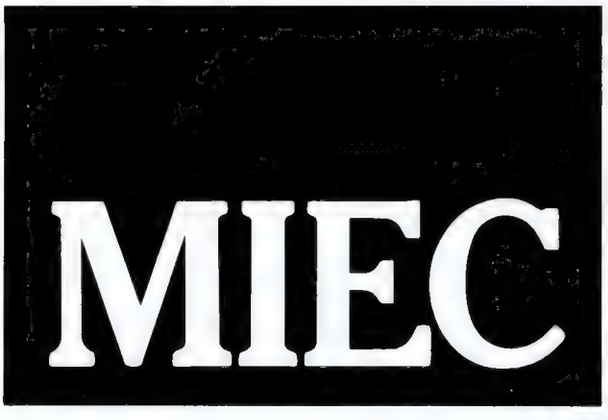
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MRI CASE OF THE MONTH

ACOUSTIC NEUROMA

Clinical Information: The patient is a 48-year-old male with rightsided tinnitus and hearing loss.

Figure A

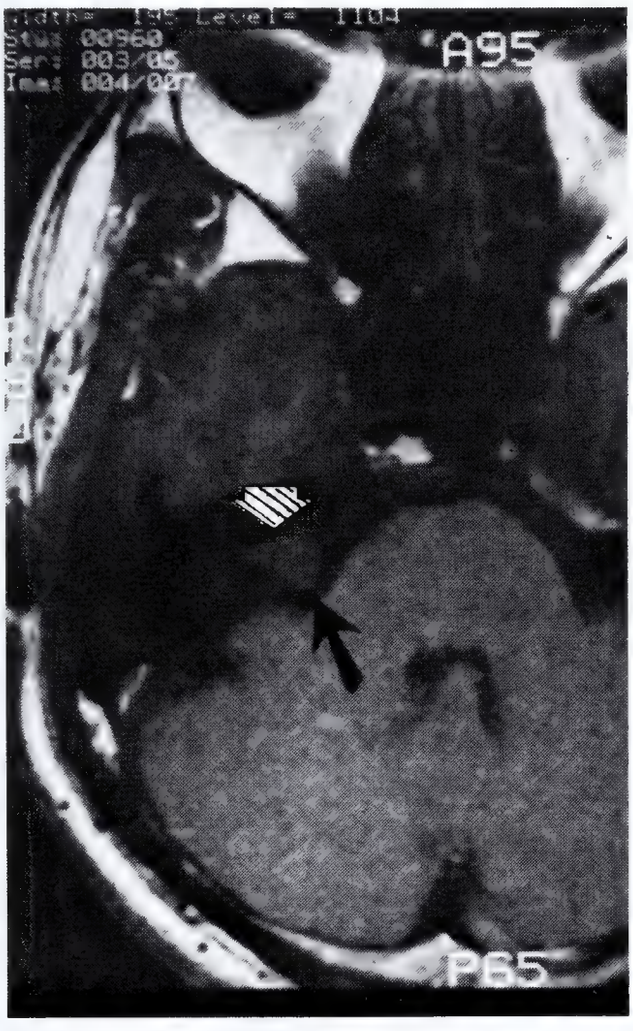
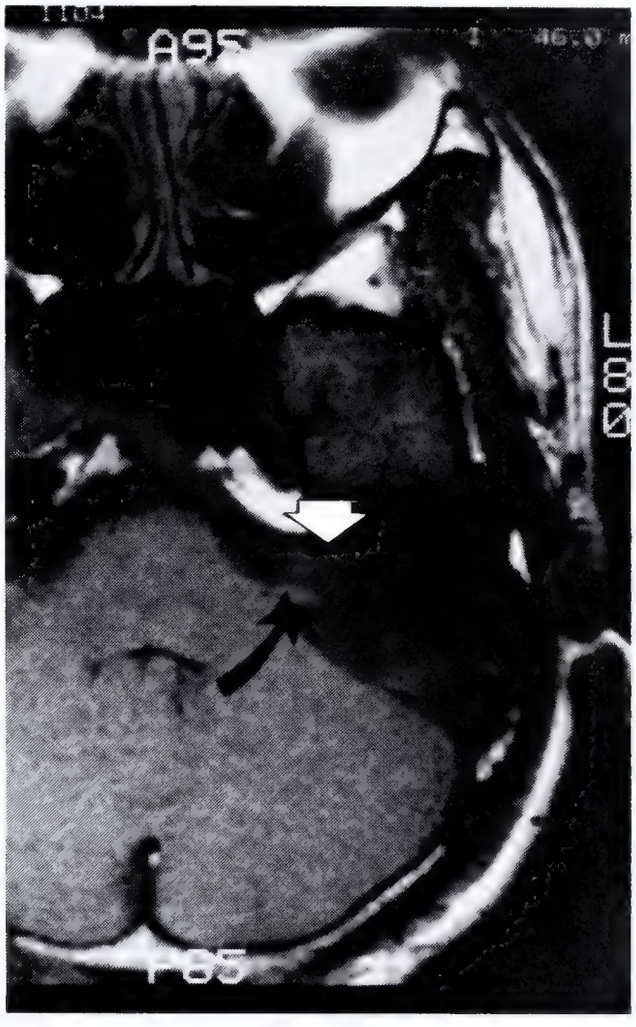


Figure B



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: Figure A. The right internal auditory canal (striped arrowhead) is enlarged due to a small acoustic neuroma which projects into the right cerebellopontine angle (straight arrow).

Figure B. Compare this with the normal left internal auditory canal (white arrowhead) and normal left VIIth and VIIIth nerves (curved arrow).

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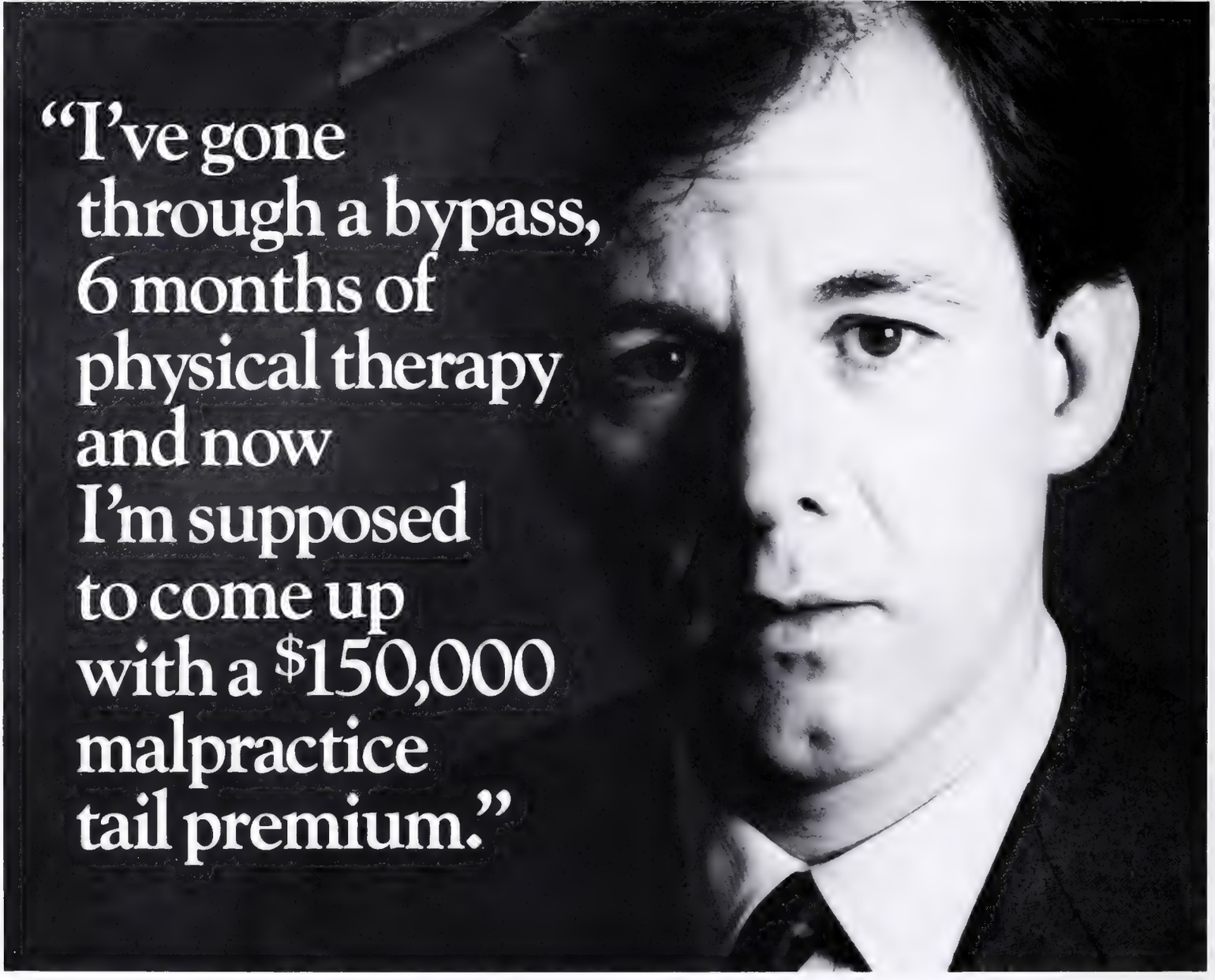
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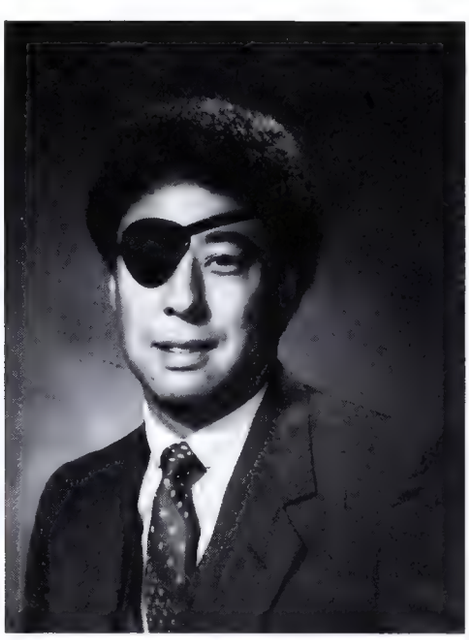
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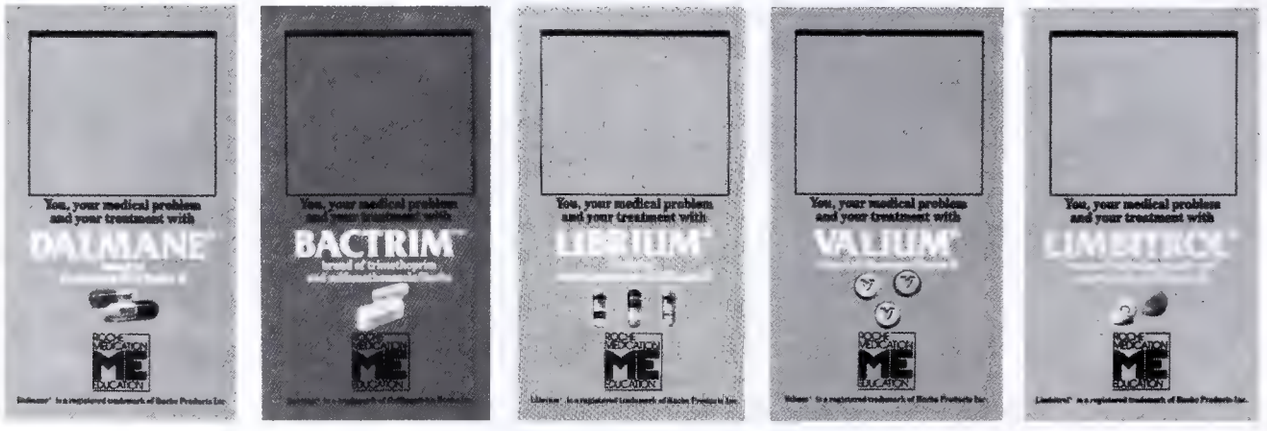
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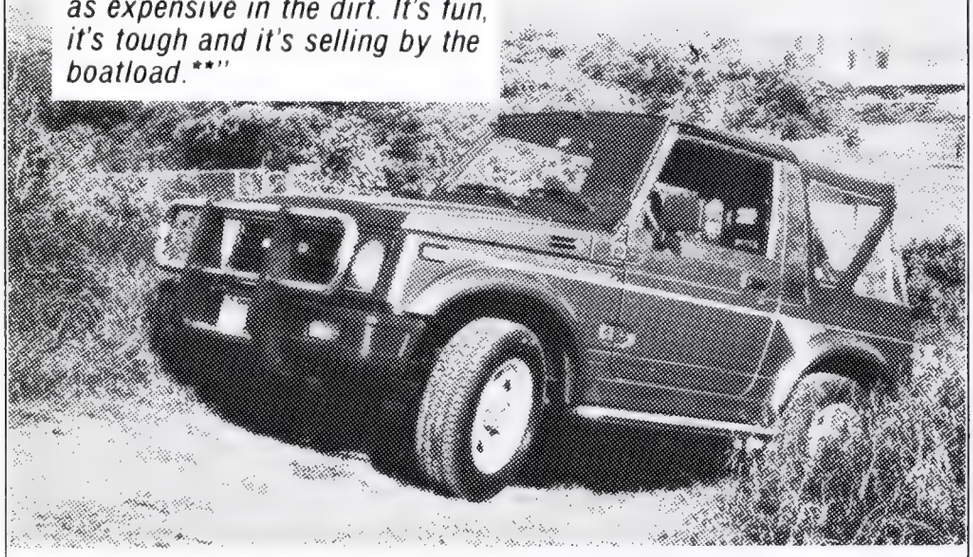
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A Reprise on Referrals

We've said it in these pages before but it needs to be said again!

The continuity of good medical care requires that a patient *not* be sent on down the line with complete disregard for his or her home base, i.e., the primary-care physician (PCP, formerly designated PMD or "private medical doctor"), who made the original referral.

All too often the patient is referred to Doctor A, who then refers him on to Doctor B and from B to C ad infinitum. The further the end point, the less likely is anyone going to remember "the source." The poor bewildered patient (most of the time) knows only that he must be on a conveyor belt, with little or nothing to say about where the next station might be. The further the end point, the less likely is the original PCP to receive feedback, much less have anything further to say about the continuing care of the patient.

In the case of hospitalization, the PCP, if he has privileges in that holy-of-holies, can physically follow his patient and even participate in his care and in the decision-making process of further referral. The PCP and his patient, afterall, have the closest doctor-patient relationship of any of the succeeding consultants. The patient, when it comes to serious decision-making often takes his PCP's advice more to heart than that from anyone else. (In fact, Informed Consent forms should have a place on them for the PCP's concurrence!)

If, on the other hand, the referring PCP cannot or does not follow his patient in-hospital, the PCP must exert superhuman efforts to "keep in touch" with the progress of his patient. He can heckle the consultant by phone (often embarrassing), ask his patient what's going on (often equally embarrassing, and unsatisfactory besides), ask the family (worse yet, when it is usually the family that calls the PCP for information!)

If no hospitalization is involved, at least per primum, it is even more disturbing for the PCP *not* to be consulted before further referrals are made by the consultant. The patient, we must remember, is almost always a compliant pawn, until somewhere along the line he gets mad as a result of being bewildered and "lost" on the conveyor belt. The situation becomes ripe for a suit.

The consultant must always remember that the PCP may have his own "stable" of consultants, whom he trusts and respects to do well by his patients; the PCP may not feel the same about the consultant's choices. This inevitably leads to the distrust being imparted, either subtly or overtly, to the patient; again, the ground is laid for a possible suit.

In summation, the ethics of professionalism require that consultants *always* be considerate enough to remember "the source" of their patients and be aware of the very great need to keep the PCP well-informed and *consulted* in reverse. (In fact, hospital charts should always be emblazoned with the PCP's name and address, and *someone* should be responsible for seeing that the PCP gets a copy of the operative notes and the chart summaries at least!)

J.I. Frederick Reppun, MD
Editor

An Apology

This issue of the JOURNAL includes an article by Douglas Soderdahl, MD, on the clonogenic assay as a means of determining whether a tumor might be susceptible to an anti-tumor drug.

Dr. Soderdahl submitted the article to the JOURNAL three years ago, at a time when its staff was in turmoil with numerous changes high and low. It was misplaced, unfortunately, and permanently lost in the course of the move from Ward Avenue to our new building on Beretania Street. However, with abject apologies for the inordinate delay, we asked Dr. Soderdahl to re-submit the article.

We feel that since the manuscript was written by a local physician who put in a lot of effort to bring something of potential value to our community, it is well worth publishing in these pages.

At the time he submitted it, Dr. Soderdahl was chief of urology at Tripler Army Medical Center; he is now associated with the Straub Clinic.

J.I. Frederick Reppun, MD
Editor



Re: HMJ's Writing Style

The following letter is to Dr. Henry Yokoyama, author of the HMJ's "News & Notes," from Dr. Harry L. Arnold Jr., founding editor of the HMJ. Dr. Arnold now resides in San Francisco.

I was pleased to read the letters from Fred and me in "Notes and News" in the July issue of the HMJ. I got a laugh out of Fred's faulting you on "Mable" but not on "Smythe"! And writing "Smythe" himself!

You might be pleased to know that many editors, including me, and also the editors of the second edition of the Random House Dictionary (1987), *do* use an apostrophe before the "s" in the plurals of numbers and single letters. Examples given are:

Dot the i's and cross the t's.
figure 8's
Mind your P's and Q's.
the 1890's
in the 20's

Some don't do it, so Fred's in good company, too. But the company you're in is, on the whole, better! On the other hand, the Chicago Press's Manual of Style says to put the apostrophe in only when the "s" by itself might be confusing: they use it in "MA's and PhD's, x's and y's, S's, A's, and I's, SOS's," but not in "the three Rs, in twos and threes, the early 1920s, CODs and IOUs, or several YMCAs and AYHs." But I think that's a lot of trouble, and I would recommend *always* using them in such situations. It couldn't hurt! And it certainly isn't wrong.

Keep up the good work; it is *appreciated!*

Harry L. Arnold Jr., MD

The Editor Responds:

Veni, vidi, vici! However, with abject apologizes to Harry, whose shoes are still too big for me, I'll be doing it my way — not the best way, but a good and logical way perhaps.

—J.I. Frederick Reppun, MD

Re: Editorial "Sudden Death"

To The Editor:

The editorial[1] regarding sudden death in recent refugee populations and the possible relationship to transient cardiac arrhythmias in "normal" hearts during nightmares doesn't seem all that far fetched.

Sleep is not just a time the body rests and the psyche contributes to intermittent dreams. From birth to death with



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INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity

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each episode of REM (rapid eye movement sleep or dreaming sleep) there are striking alterations in the autonomic nervous system that have an impact upon multiple organ systems. REM sleep in normal, unstressed individuals is associated with phasic changes including: Elevations of systolic BP as much as 40 mmHg, coronary vasoconstrictions, tachycardia, premature ventricular contractions, bronchoconstrictions, increased cerebral blood flow and intracranial pressure, absent thermoregulation, and genital tumescence.[2] These episodes last up to 20 minutes and occur four to five times per night with the preponderance in the latter 1/3 of the night. If one then adds some baseline disease process, it is easier to understand conditions like early morning asthma, "nocturnal angina," or to hear of someone "awakening with a stroke." Although sleep occupies only 1/3 of the 24 hour day over 1/2 of all deaths occur then.[3]

Nightmares are a special type of dream and they occur commonly in disorders such as post-traumatic stress. They have a higher level of psychic content and are associated with increased levels of autonomic discharge than regular dreams.[4]

It's not parapsychology, and the Kahuna ana'ana isn't about causing sudden nocturnal death in recent refugees from Asia.[1] It's just another piece of sleep pathophysiology we don't quite yet fully understand.

James W. Pearce, MD, Director,
Sleep Disorders Center of the Pacific
Straub Clinic & Hospital

REFERENCES

1. Reppun JIF. Sudden Death. Editorial. *Hawaii Medical Journal,* 46 (12):458, 1987.
2. Orem J, Barnes CD (eds.): Physiology in Sleep. New York, Academic Press, 1980.
3. Kripke DF, Ancoli-Israel S. Epidemiology of Sleep Apnea Among the Aged: Is Sleep A Fatal Disorder?, in Sleep/Wake Disorders: Natural History, Epidemiology, and Long-Term Evolution, Guilleminault C & Lugaresi E (eds), Raven Press, New York, 1983, 157.
4. Hartmann E: The Nightmare. Basic Books Inc., New York, 1984, 248.

Very interesting! The JOURNAL welcomes such a response from a reader, and the editor particularly is pleased with an elucidation of a puzzling phenomenon.

—Editor

Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS
ONGOING

For a complete list of ongoing programs, please refer to the March 1987 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

The Hawaii Medical Association does not review or evaluate the programs listed in the Hawaii Medical Journal Continuing Medical Education column and assumes no responsibility for educational value, scentific content, changes in agenda or cancellations.

April 16-23, 1988	CURRENT CONCEPTS IN ALLERGIES AND CLINICAL IMMUNOLOGY, University of Washington School of Medicine, CME SC-50, Seattle, WA 98195, 206-543-1050. Location: Royal Lahaina Resort, Maui.
April 16-23, 1988	MANAGEMENT OF THE SURGICAL PATIENT, Stanford School of Medicine, Office of Postgraduate Medical Education, 415-723-5594. Location: Westin Mauna Kea Beach Hotel, Kamuela, Big Island of Hawaii.
April 16-23, 1988	INTERNAL MEDICINE, Stanford School of Medicine, Office of Postgraduate Medical Education, 415-723-5594. Location: Westin Mauna Kea Hotel, Kamuela, Big Island of Hawaii.
May 5-8, 1988	**TIMELY TOPICS IN PEDIATRICS, American Academy of Pediatrics, Hawaii Chapter, Joseph Young, MD, 1507 S. King Street, #408, Honolulu, HI 96826, 947-3024. Location: Kaluakoi Hotel, Molokai.
May 7-10, 1988	HAWAII 1988 SYMPOSIUM ON THE SCIENCE & ART/FRONTIERS OF PREVENTIVE MEDICINE, Sponsored by: Region III, International Health Evaluation Association; hosted by Pacific Health Research Institute, 846 So. Hotel Street, Suite 303, Honolulu, HI 96813. Location: Kona Surf, Big Island of Hawaii.
May 9-16, 1988	DIAGNOSTIC AND THERAPEUTIC SKILLS, University of Southern California School of Medicine, 213-224-7051. Location: Mauna Kea Beach Hotel, Kamuela, Big Island of Hawaii.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Indiana "Mild" Medical Malpractice Climate

O. Sam Ashouri, MD*

Editor's Note

The HMA has received the following article with the suggestion that in states other than Indiana, medical association members might be much interested in how the issue of rising medical malpractice insurance premiums has been addressed in other jurisdictions.

HMA members concerned with tort reform in Hawaii might learn something from the Indiana experience.

The JOURNAL is appreciative of Dr. Ashouri's offer and that of the Doctors Publishing Inc. to let us reprint the report.

—J.I. Frederick Reppun, MD
Editor

Indiana's medical malpractice climate was compared to that of other states by Lawrence E. Allen, MD, president of the Indiana State Medical Association in Indiana Medicine (1985). He stated that "much of what we see happening throughout the rest of the nation is remarkably non-existent in the state of Indiana." He compared the cost of malpractice insurance premiums in Indiana to other states as 2½ to 10 times lower. A neurosurgeon's premium in Indiana averages $7,569 for basic coverage including a surcharge, compared with nearly $76,000 in adjacent Cook County, $92,000 in Miami and greater than $100,000 in New York. Premiums remained stable in Indiana for many years. This unique climate is attributed to Public Law 146, enacted by The State General Assembly in 1976 and described by Dr. Allen as "the most significant tort reform legislation ever accomplished in the history of American medicine."

Highlights of Medical Malpractice Act of Indiana and Public Law 146:

1—**Limitation on Claims:** Indiana limits the recovery for each case of death or injury from medical malpractice to $500,000. The maximum liability of a health-care provider is $100,000 per claim and $300,000 per annum (excluding hospitals and health maintenance organizations). A patient compensation fund was established to pay claims in excess of the provider's ability to pay ($100,000-$300,000), up to a maximum of $500,000. The fund is administered by the Indiana Department of Insurance, and its revenues are derived from a surcharge consisting of 75% of the provider's premium for his basic coverage. After January 1986, the commissioner of the Department of Insurance may raise the surcharge to 100% of the basic premium to permit $15 million to be placed in reserve to pay claims.

2—**Medical-Review Panel:** A claim against a health-care provider may not be brought before a court unless it has been reviewed by a medical-review panel (except when the claim is for less than $15,000, or when all parties agree otherwise). The panel consists of one lawyer who is a non-voting chairman of the panel and three health-care providers, two of whom must practice in the same specialty as the defendant. The panel will determine whether:

- The provider acted in accordance with the accepted medical standards;
- the provider did not act according to the accepted medical standards;
- the problem cannot be solved by the panel; and
- the provider's act had nothing to do with the claimed injury.

The plaintiff may wish to enter into settlement or may wish to bring an action to the court. The panel findings are admissible to the court in legal proceeding, but the plaintiff may wish to call in other witnesses and present other evidence as well.

The panelists will have an absolute immunity from civil liability for all communications or conclusions made in the course of their determination.

3—**Statute of Limitations:** There is a time limit of two years since the date of injury for an action to be filed.

4—**Attorney Fees:** There is no limitation on attorney fees with respect to payments made through basic insurance coverage or by provider. Attorney fees are limited to 15% of any recovery paid by the patient compensation fund.

5— **Residual Insurance:** If a health-care provider has been denied liability coverage by at least two insurers, the state will insure the provider under the Indiana Residual Malpractice Insurance Authority (IRMIA).

* Reprinted from *The Physician's Guide to Practice Location by State;* 1987-88, Volume I (Alabama to Kentucky), by O. Sam Ashouri, MD, published by Doctors Publishing Inc., 4221 Baymeadows Road, Suite 2, Jacksonville, Florida 32217.

REFERENCES

1. Allen LE: Public Law 146, An Indiana Advantage. *Indiana Medicine,* March 1985.
2. Physician's Guide to Indiana Law, ISMA. *Indiana Medicine,* March 1986.

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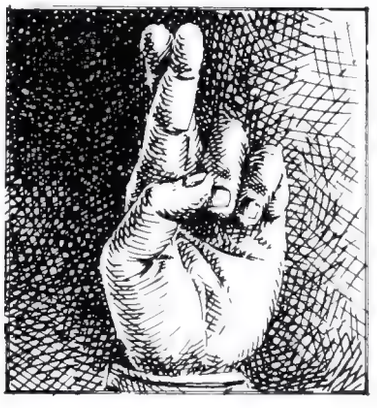


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The Clonogenic Assay in Perspective

Douglas W. Soderdahl, MD, FACS*

In 1978 Salmon and colleagues reported a new in-vitro test to determine the sensitivity or resistance of tumors to anticancer drugs.[4] In this "human tumor stem-cell assay," which is analagous to sensitivity testing for antibacterials in patients with bacterial infection, tumor is suspended as single cells, exposed to chemotherapeutic drugs and cultured on soft agar. Surviving cells proliferate, much as bacteria do, to form colonies which are then compared to untreated, suspended and cultured cell colonies in order to evaluate drug sensitivty or resistance for any given tumor. While it appears that a stem-cell assay might permit more accurate selection of patients for therapy with a particular chemotherapeutic agent, its predictive value for clinical response has not been shown, despite rigorous trials. Low plating efficiency, small proportion of suitable tumors, difficulty in the preparation of single cell suspensions, undertermined significance of colony size, and the vagaries of in-vitro to in-vivo correlation preclude large-scale clinical application of the clonogenic assay at this time.

In the quest to develop treatment programs for patients with cancer that maximize chance for cure and minimize adverse side effects, a number of systems have been investigated which to a greater or lesser extent predict host response to therapy. Because patients with the same tumor type and burden do not respond predictably to antineoplastic agent(s), oncologists recognize the desirability of a test which allows individualization of therapy. The human tumor stem-cell assay, or clonogenic assay, at the present time enjoys wide popularity and respect, although in some measure unfounded. Surely the ability to grow and test human tumors in soft agar media represents progress in our understanding of tumor biology, but it does not follow that widespread clinical application of human tumor culture and chemotherapeutic testing connotes state-of-the-art oncologic practice. For reasons discussed below I propose diligent research efforts to omit flaws from the assay itself, followed by carefully controlled, randomized, clinical trials to validate in-vitro to in vivo-correlations.

Accepted for publication January 1988

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Chemotherapeutic Predictive Assays

Success with synthetic cell-culture media and sensitivity testing to available antimicrobials in the early 1950s led to efforts to develop similar testing systems for chemotherapeutic regimens in human cancer. The ideal assay would be simple, reproducible, inexpensive, rapid and correlated positively and negatively with patient response. Four categories of predictive tests appeared. None is without flaw. Investigators detected drug antitumor effects by: (1) Cell damage in monolayer or organ culture;[1] (2) inhibition of intracellular metabolism;[2] (3) inhibition of radioactive precursor incorporation;[3] and (4) clonogenic cell growth. The latter is the subject of this review. Problems common to each test include: Failure to obtain viable cells for testing, culture contamination, time-consuming methodology, empiric selection of drug concentrations and exposure times, standardization of conditions, quantitation of results and clinical predictive value.

The Human Tumor Stem-Cell (Clonogenic) Assay

A characteristic of each of the predictive test systems, except the clonogenic assay, is the measurement of drug effect upon total cell population. Because the concept of stem cells accurately describes properties of both normal hemopoietic and neoplastic cell populations, indiscriminant measurement of drug effect upon tumor cells that may demonstrate proliferative potential or not represents a serious shortcoming. According to the model, only a small proportion of tumor cells, known as stem cells, is capable of self-renewal and differentiation into tumors of identifiable histologic types. Perhaps the majority of the descendants of stem cells lose the capacity to divide. Hence, while other assay systems measure drug effects upon cells with little or no proliferative potential, the stem-cell assay reported by Salmon detects drug activity directed against only that small proportion of cells that maintain tumor growth, obviously an important finding.

Since *in situ* descendants of a particular tumor cell cannot be counted, the stem-cell concept remains hypothetical. Several lines of evidence support the stem-cell model, including: Inverse relation between proliferation and tumor differentiation,[5] tumor cell plating efficiency in the range 0.001 to 1.0%,[6,7] definable physiochemical properties of tumor cell subpopulations[8,9] and post-radiotherapy growth of only a small fraction of tumor cells.[10,11] Though cell progeny cannot be quantified, cloning capacity of individual cells can be assessed. It is likely that clonogenic cells under test conditions do indeed represent stem cells in vivo.[12-14]

Methodology (see Figure 1)

Tumor is harvested, dissociated and processed to form a single cell suspension. Trypan blue exclusion confirms cell viability. Cell concentration is adjusted to 1.0 x 10^6 cells/ml. The cells are exposed for one hour to three drug concentrations believed to be achievable pharmacologically in vivo. Cells are cultured on enriched soft agar for 7 to 14 days to permit colony

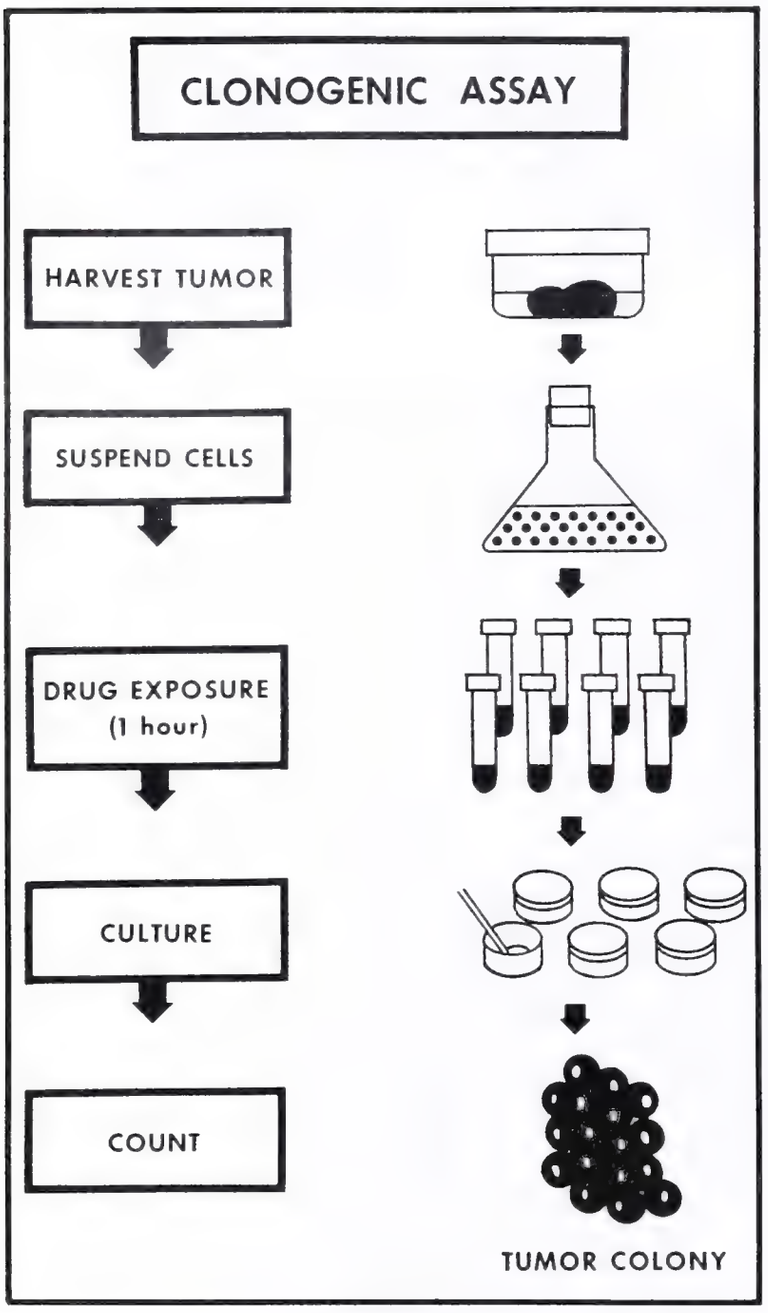


Figure 1.

Flow diagram of human tumor stem-cell (clonogenic) assay (adapted from Salmon [15]).

growth. Tumor colonies are counted, with a required minimum of 30 colonies per plate, to assure accuracy in detection of drug effect.

In-vitro to In-vivo Correlation

The ultimate value of the clonogenic assay lies in its ability to improve management of patients with cancer, not only defining specific tumors' sensitivity/resistance levels to antineoplastic agents, but also identifying agents showing promise as anti-tumor drugs. Impressive correlations have been demonstrated between decreased stem-cell survival in the culture plate and clinical response. Whereas the clonogenic assay correctly predicts clinical response in 40 to 70% of patients, clinical resistance correlates accurately in 84 to 98% of cases.[16-18] One prospective, but uncontrolled, study showed better patient response to drugs selected by in vitro testing when compared to empiric therapy.[19] Further, unrandomized patients with multiple myeloma and ovarian cancer fare better when administered assay-indicated chemotherapeutic agents.[20,21] It appears that the human tumor stem-cell assay may permit more accurate selection of a chemotherapeutic regimen for patients with cancer. However, a literature survey discloses only small, nonrandomized and uncontrolled studies. The predictive responses are partial, short-term and of doubtful qualitative or quantitative benefit.

Drawbacks

(1) Human tumor cells clone inefficiently, which may derive from the low proportion of stem cells in a given tumor, but it is more likely that since nutritional and hormonal needs of tumor cells are unknown, the assay underestimates the true number of stem cells in vivo. Von Hoff reported that of 8,000 tumors cultured, only 31% cloned in sufficient numbers for testing. Of the cloning tumors, only 8% were sensitive to an agent tested. He concluded that use of the clonogenic assay guides drug selection in only a relative few patients with tumor.[22]

(2) The dissociation of tumors into single cell suspensions must be meticulously done. On the one hand, damage to cells during processing may render them more susceptible to the drug agent; while on the other hand, incomplete removal of clumps of tumor cells ar the outset may cause later error in colony count.

(3) Colony size criterion of 30 to 50 cells is arbitrary. Thus, colony size may reflect proliferative potential of the cell origin rather than the number of stem cells. Quite possibly, the latter predicts tumor response to the drug more correctly.

(4) The clonogenic assay measures only drug/tumor interaction. Obviously excluded from testing are those drugs which must be altered in vivo before antineoplastic actibity is observed. Also, a one-hour incubation time is clearly inappropriate for drugs with variable rates of clearance from plasma and for those agents which are cell-cycle specific. Additionally, drug concentrations must not be inappropriately high (false positive) or low (false negative).

(5) Controversy that is not inconsiderable exists over what constitutes clinical response. Cure or long-term response probably denotes impact of therapy on tumor stem cells. However, partial and/or short-term response more likely reflects the effect of therapy on all tumor cell subsets, including those with little or no proliferative capacity.

(6) At the present time, drug sensitivity testing requires two to three weeks; chemotherapy is usually started before results are in. Therefore, the clonogenic assay's value may lie in its ability to select appropriate antineoplastic agents that can be used as surgical adjuvants for tumors with a high propensity toward occult metastases.

Areas of Further Investigation

Potentially, the cloning assay can be used to identify new chemotherapeutic agents. The National Cancer Institute presentyl sponsors such a trial.[23] Further, it appears that the clonogenic assay may enhance the retrieval and identification of tumor cells present in bone marrow, lung and bladder washings.[24, 25]

Conclusion

It appears that the clonogenic assay is a potentially useful tool in the selection and monitoring of tumor therapy. However, prior to popularization of the assay, refinement and standardization of its technology, coupled with controlled, randomized, clinical trials, need to be accomplished.

(Continued on page 161)

CLONOGENIC ASSAY *(Continued from page 152)*

REFERENCES

1. Wright JC, Plummer-Cobb J, Gumport S, Golomb FM, and Safadi D: Investigation of the relation between clinical and tissue culture response to chemotherapeutic agents on human concer. *N Engl J Med,* 1957, 257:1207-11.
2. Black MM, and Speer FD: Further observations on the effects of cancer chemotherapeutic agents on the in-vitro dehydrogenase activity of cancer tissue. *J Natl Concer Inst,* 1954, 14:1147-58.
3. Bickis IJ, Henderson MD, and Quastel JH: Biochemical studies of human tumors. II. In-vitro estimation of individual tumor sensitivity to anticancer agents. *Cancer,* 1966, 19:103-13.
4. Salmon SE, Hamburger AW, Soehnlen B, Durie BGM, Alber DS, and Moon TE: Quantitation of differential sensitivity of human tumor stem cells to anticancer drugs. *N Engl J Med,* 1978, 298:1321-7.
5. Meyer JS, Rao BR, Stevens SC, and White WL: Low incidence of estrogen receptor in breast concers with rapid rates of cellular replication. *Cancer,* 1977, 40:2290-8.
6. Courtenay VD, Selby PJ, Smith IE, Millis J, and Peckham MJ: Growth of human tumor cell colonies from biopsies using two soft-agar techniques. *Br J Cancer,* 1978, 38:77-81.
7. von Hoff DD, Down J, Harris G, and Reisdorf G: Human tumor cloning: feasibility and clinical correlations. *Cancer Chemother Pharmocol,* 1981, 6:265-71.
8. Mackillop WJ, Stewart SS, and Buick RN: Density-bolume analysis in the study of cellular-heterogeneity in human ovarian carcinoma. *Br J Cancer,* 1982, 45:812-20.
9. Fialkow PJ, Jacobson RJ, and Papayannopoulou T: Chronic myelocytic leukemia: clonal origin in a stem cell common to the granulocyte, erythrocyte, platelet an monocyte/macrophage. *Am J Med,* 1977, 63:125-130.
10. Tepper J: Clonogenic potential of human tumors: a hypothesis. *Acta Radiol Oncol Radiat Phys Biol,* 1981, 20:283-8.
11. Bush RS, and Hill RP: Biologic discussion augmenting radiation effects and model systems. *Laryngoscope,* 1975, 85:1119-33.
12. Selby P, Buick RN, and Tannock I: A critical appraisal of the human tumor stem-cell assay. *N Engl J Med,* 1983, 308:129-34.
13. Carney DN, Gazder AF, Bunn PA, and Guccion JG: Demonstration of the stem cell nature of clonogenic tumor cells form lung cancer patients. *Stem Cells,* 1981, 1:149-64.
14. Park CH, Bergsagel DE, and McCulloch EA: Mouse myeloma tumor stem cells: a primary cell culture assay. *J N C I,* 1971, 46:411-22.
15. Salmon SE: Cloning of Huma tumor stem cells. P. 225. New York: Alan R Liss, 1980.
16. Meyskens FL, Moon TE, and Dana B, et al: Quantitation of drug sensitivity by human metastatic melanoma colony-forming units. *Br J Cancer,* 1981, 44:787-97.
17. Mann BD, Kern DH, Giuliano AC, et al: Clinical correlations with drug sensitivities in the clonogenic assay: a retrospective study. *Arch Surg,* 1982, 117:33-6.
18. von Hoff DD, Casper J, Bradley E, Sandbach J, Jones D, and Makuch R: Association between human tumor colony-forming assay results and response of an individual patient's tumor to chemotherapy. *Am J Med,* 1981, 70:1027-32.
19. von Hoff DD, Page C, Harris G, Clark G, Cowan J, and Coltman CA: Prospective clinical trial of a human tumor cloning system. Proc Am Assoc Cancer Res. *Am Soc Clin Oncol,* 1981, 22:154.
20. Alberts DS, Surwit EA, Leigh S, Moon TE, and Salmon SE: Improved survival for relapsing ovarian cancer patients using the human tumor stem cell assay to select chemotherapy. *Stem Cells,* 1982, 1:294-5.
21. Durie BGM, Young LA, and Salmon SE: Human myeloma in-vitro colony growth: interrelationships between drug sensitivity, cell kinetics, and patient survival duration. *Blood,* 1983, 61:929-34.
22. von Hoff DD: "Send this patient's tumor for culture and sensitivity." *N Engl J Med,* 1983, 308:154-5.
23. Shoemaker RH, Wolpert-DeFilippes MK, Makuch RW, and Benditti JM: Application of the human tumor clonogenic assay to drug screening. *Stem Cells,* 1982, 1:308.
24. Stanisic TH, and Buick RN: An in vitro clonal assay for bladder cancer: clinical correlation with the status of the urothelium in 33 patients. *J Urol,* 1980, 124:30-3.
25. Pollard EB, Tio F, Myers JW, Clark G, Coltman CA, and von Hoff DD: Utilization of a human tumor cloning system to monitor for marrow involvement in small cell carcinoma of the lung. *Cancer Res,* 1981, 41:1015-20.



Sickle Cell Anemia and Thalassemia

This little book on sickle cell disease, beta-thalassemia and other hemoglobinopathies contains many nuggets of useful information. It will prove very useful for any health professional who wants ready access to clinical information without referring to major monographs such as the key book *Man's Hemoglobins* by H. Lehmann and R.G. Huntsman (North Holland, 1974), or wading through the vast confusing literature about these disorders.

The author, Dr. Huntsman, was my mentor when I was a resident in pathology. The stamp of his puckish wit on some colorful passages recalled many fond memories.

Clinical features, diagnostic criteria, and complications of major disorders are all discussed, with brief practical advice about management. Of necessity in such a small book, several complex controversies are ignored, only one viewpoint being given (with which I usually agreed). The important alpha-thalassemias prevalent among Oriental populations are inadequately covered.

How the globin gene alterations arose is reviewed clearly in a separate genetic section. Diagrams of the alpha-globin gene variants are unorthodox, however, not nearly as handy as Lehmann's [Lancet 1:552, 1984] representation of the two normal alpha-gene pair as (aa/aa), with one alpha-gene deletion becoming (-a/aa), two deletions either (-a/-a) or (--/aa), three deletions (--/-a), and four deletions (--/--).

Rapid advances in DNA technology make any discussion about diagnosis, carrier detection and fetal testing for hereditary anemias unavoidably obsolete before publication, but the excellent glossary will sustain the utility of this book for several years.

Nearly half the book is a huge glossary, explaining many more terms than are used in the text, defining clearly the meaning of some medical and hematological words that should be well known but are often misunderstood or used incorrectly. Included are many obscure and not so obscure technical terms such as "neocyte" and "MCV"; simple words such as "gravida" or even "anemia"; and newly coined terms such as "AIDS" and "chorionic villus sampling." The new techniques of polymerase chain reaction and pulsed-field electrophoresis were developed after the book was written.

Non-specialist physicians, trainees, and anyone responsible for patients with a hereditary anemia will find that $10 paid to the Canadian Sickle-Cell Society, (P.O. Box 13156, Station A, St. John's Newfoundland, Canada A1B 4A4) is an excellent investment for this book, which just fits in a laboratory coat pocket instantly available for a quick check about some problem or definition.

Yujen Edward Hsia, BM, FRCP

Clinical Use of Ciprofloxacin: An Interesting New Oral Antibiotic

Steven J. Berman, MD*

Lengthy duration of treatment with antibiotics is a commonplace occurrence. Because of improved life support and surgical technology, new surgical materials and more effective cancer chemotherapy, hospitals are filled with patients who are more susceptible and less able to deal with infections and their complications. Fortunately, technology has placed at our command many excellent newer antibiotics to combat these infections, including third-generation cephalosporins, ureido penicillins, monobactams, and carbapenams. All of these new agents are administered parenterally. If the duration of therapy is lengthy, the patient may be confined to the hospital setting solely for the administration of antibiotics or, alternatively, antibiotics can be administered in the home or at an outpatient clinic setting. There is a new class of antibiotics called the "fluorinated quinolones" which can be taken orally and are as potent as the most advanced parenteral antibiotics. We would like to report to you our experience with ciprofloxacin, *a fluorinated quinolone which is just being introduced for clinical use.*

The first quinolone was nalidixic acid. It was very effective in vitro against a wide variety of gram negative rods, but its clinical usefulness was limited because bacteria easily developed resistance to it, especially in the presence of renal stones or in dwelling foley catheters. Subsequently several other quinolone compounds were synthesized and released for general use, such as Zanoxycin, but there was really very little improvement over nalidixic acid. When fluorine was attached to the basic quinolone ring, the compound became much more interesting.

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The fluorinated quinolones are active against a wide spectrum of gram-negative bacteria and gram-positive bacteria. The mechanism of action of these quinolones is different than all other classes of antibiotics. Quinolones are thought to act on DNA synthesis through interfering with DNA gyrase. This may explain why the spectrum of activity is so broad, such as against all staphylococcal species including methicillin-resistant organisms, the enterobactericeaie, and many intracellular bacterial pathogens such as chlamydia, mycoplasma, legionella, and even mycobacteria. The fluorinated quinolone compounds are not effective against anaerobic bacteria and thus do not induce overgrowth of yeast, which occurs commonly with other broad spectrum antibiotics such as cephalosporins and penams.

The mechanism of resistance to the flourinated quinolones differs from that of any other class of antibiotics in that plasma-mediated resistance does not occur, and beta lactamase enzymes are not effective. Resistance can occur, however, from spontaneous mutation, but only at a low frequency.

The serum half-life of ciprofloxacin in healthy individuals is approximately three hours. A 750 mg dose produces a peak serum level of 2.8 $\pm$ 1.5 micrograms per ml (mcg/ml). The drug is both metabolized and excreted by the kidneys. If the creatinine clearance is less than 30 ml/mm, the dose of ciprofloxacin should be halved. Ciprofloxacin and other well-absorbed quinolones have produced interstitial fluid levels equal to serum levels, and these may persist up to eight hours.

Materials & Methods

During a three-month period, August through November 1982, all cephalothin-resistant, gram-negative, aerobic bacteria isolated from clinical specimens were collected from the microbiology laboratories at Queen's Medical Center, St. Francis Hospital and Honolulu Biological Laboratory, Ltd. The organisms were identified by these laboratories. Antibiotic susceptibility testing, using the Microscan microtiter technique, was performed in our research laboratory. We also performed an open, non-comparative, clinical trial, using ciprofloxacin treatment in patients with clinical infections. The protocol for evaluation of the efficacy and safety of ciprofloxacin was supplied by Miles Laboratory and approved by the Research Committees of Queen's Medical Center, Kuakini Hospital and St. Francis Hospital. Patients enrolled in the protocol were referred by their personal physician.

TABLE I

SUSCEPTIBILITY OF CEPHALOTHIN-RESISTANT NEGATIVE RODS TO THIRD GENERATION CEPHALOSPORINS, UREIDO PENICILLINS AND IMIPENAM IN 330 CLINICAL ISOLATES IN 1982

	No.	CEFOPERAZONE	CEFTRIAXONE	CEFTAZIDIME	IMIPENEM	CARBENICILLIN	MEZLOCILLIN	GENTAMICIN
		% Susceptible						
E. coli	34	97	94	94	100	45	89	100
Citrobacter	17	94	88	86	100	53	100	100
Klebsiella	6	100	100	100	100	0	100	100
E. aerogenes	23	86	56	86	95	95	86	100
E. cloacae	42	87	89	86	91	83	87	100
S. marcescens	34	92	92	87	91	97	86	76
P. vulgaris	6	91	100	100	80	33	100	83
Morganella	11	–	100	100	100	100	100	100
Prov vettgeri	6	100	–	100	100	83	–	83
Ps. aeruginosa	13	96	83	94	94	80	97	72
Acinetobacter	18	100	16	100	100	100	100	100

Results

Microbiology

Three hundred and thirty bacterial isolates were collected from the clinical laboratories of Queen's Medical Center and St. Francis Hospital. All of the organisms were resistant to cephalothin. This represented approximately 48% of all aerobic, gram-negative rods isolated at these institutions during the collection period. The organisms were tested against third-generation cephalosporins, ureido penicillins and imipenams (Table I) as well as against oral agents that might have been effective against cephalothin-resistant, gram-negative rods, such as tetracycline, trimethoprim-sulfa, carbenicillin and ciprofloxacin. Ciprofloxacin compared favorably with all of the other antibiotics (Tables I, II). For Pseudomonas aeruginosa, 95% of the isolates were inhibited by ciprofloxacin.

TABLE II

COMPARATIVE "IN VITRO" SUSCEPTIBILITY OF 330 CEPHALOTHIN-RESISTANT GRAM-NEGATIVE RODS AGAINST ORAL ANTIBIOTICS

	No.	% Susceptible			
		Tetracycline	Trimeth./ Sulfa	Carbenicillin	Ciprofloxac
E. coli	34	64	71	45	100%
Citrobacter sp.	17	67	71	53	100%
Klebsiella sp.	6	83	50	0	100%
E. aerogenes	23	89	100	86	100%
E. cloacae	42	91	83	83	100%
S. marcescens	34	12	91	67	100%
P. vulgaris	6	50	100	33	100%
Morganella sp.	11	70	100	100	100%
Providencia sp.	6	0	33	83	100%
P. aeruginosa	130	0	0	80	95%
Ps. maltophilia	3	0	0	80	100%
Acinetobacter	18	81	100	100	100%

Clinical Experience

Forty-one patients completed a minimum of five days of treatment with ciprofloxacin. The clinical infection was "cured" in 29 patients (71%), and there was clinical improvement in 10 patients (4%). An adverse drug-reaction occurred in one patient; in one patient ciprofloxacin was not effective.

Fourteen patients with urinary tract infections (Table III) were treated, including seven patients infected with P. aeruginosa resistant to all other available oral agents. Ciprofloxacin effectively sterilized the urine in all patients during therapy and for at least five days after treatment was completed.

TABLE III

	Skin & Soft-Tissue	Urinary tract	Post-Operative Wound
No. Patients	15	14	8
Age (Mean)	47±18	71±18	58±11
Pathogens			
E. coli	0	2	2
K. pneumoniae	0	4	0
E. aerogenes	0	0	1
P. mirabilis	2	0	0
C. freundii	0	1	0
S. marcescens	1	0	0
P. aeruginosa	5	7	4
S. aureus	7	0	0
S. epidermidis	0	0	1
Duration Rx (Mean days)	18	15	13
Clinical Outcome			
Cure	11	14	4
Deteriorate	1	0	1
Improve	3	0	3
Micro. Outcome			
Cure	14	14	4
New Colonization	0	0	2
Persistent Organism	1	0	2
Superinfection	0	0	0

In 14 of 15 patients with skin and underlying soft-tissue infections, the infection improved or was considered cured. Many of these patients had complicated infections. Eight patients were infected with gram-negative bacteria, including four patients with diabetes who had infections of the lower extremities, two patients with decubitus ulcers and one patient taking prednisone and cyclosporin immunosuppression for a renal transplant.

Eight patients with postoperative wound infections were treated, including the sternal wound site following coronary artery bypass graft surgery (2 patients), cholecystectomy wound sites (2 patients), skin graft flap site (2 patients), postoperative debridement of neck for carcinoma (1 patient), and the transplant site of a cadaver kidney (1 patient). Gram-negative bacteria susceptible only to parenteral antibiotics were the causitive pathogens in all but one of these infections. Erradication of bacteria occurred in four patients and the persistent presence of the infecting organism was noted in two patients. Colonization by new organisms occurred in two patients. In seven of eight patients the infection was cured, or there was demonstrated improvement.

Additionally, one patient with gram-negative osteomyelitis of the ankle caused by Enterobacter cloacaea, received ciprofloxacin. The wound healed and the patient's progress has been followed for one year since then without recurrence of infection.

Side effects were few. Nausea occurred in four patients; only one patient stopped taking the drug. Drug fever and reversible neutropenia occured in one patient.

Comments

Ciprofloxacin, one of the fluorinated quinolones, will offer an attractive alternative in the treatment of many infections. Taken orally, it is as effective as many parenteral antibiotics. In addition to being effective in the infections described above, such as urinary tract infections, skin/soft-tissue infections, postoperative wound infections and osteomyelitis, ciprofloxacin has other unique properties. It is extremely effective against *Nisseria gonorrheae,* including the penicillinase-producing strains. It will probably become the drug of choice for uncomplicated gonorrhea in the male patient. Virtually all diarrheal bacterial pathogens are sensitive to ciprofloxacin. This includes E. coli, Shigella and Salmonella species, Aeromonas, Yersinia and Entercolitis, and Campylobacter. Ciprofloxacin is also effective against all of the commonly occurring respiratory pathogens. It probably is not superior to existing antibiotics for respiratory infections, except in the patients with cystic fibrosis who become colonized with P. aeruginosa.

Ciprofloxacin seems to be well-tolerated with few side effects. Of 2,800 patients who took part in treatment protocols, gastrointestinal complaints were the most common, mainly nausea, vomiting or diarrhea. These occurred in 7.8% of the patients. Nervous system side effects, such as headaches, dizziness, or restlessness, were reported in 3.3%. Liver function abnormalities were noted in 2.8%. Other adverse reactions were noted in less than 2% of the patients taking ciprofloxacin.

Summary

Ciprofloxacin is representative of a new class of antibiotics, fluorinated quinolones, which will add to the comfort of many patients and be cost-effective as compared to parenteral treatment. Despite these obvious attractive properties, as a cautionary note, its ultimate role in the treatment of infections will be limited if development of widespread antibacterial resistance does occur, which may happen with indiscriminate usage. It should not be used therefore, for trivial infections, wherein other oral agents would be effective.

ACKNOWLEDGMENTS

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REFERENCES

1. Neu HC, Percival A, Lode H, eds. Proceedings of a symposium. Ciprofloxacin: A major advance in quinolone chemotherapy. *Am J Med* 1987; 82(4A):1-404.
2. Berman SJ, Schwartz SM. Clinical evaluation of ciprofloxacin in patients with moderately severe bacterial infections. *Am J Med* 1987; 82(4A):233-236.
3. Neu HC, Reeves DS, eds. Current topics: Ciprofloxacin pharmacokinetics and clinical experience. *Eur J Clinical Microbiology* 1986;5(2):177-262.

. . . patients advocacy made difficult

The Medical "Overutilizer"

Harry K. Davis, MD*

As more bureaus and agencies become involved in the health-care delivery system, new words are added to the medical vocabulary. The "overutilizer" is bureaucratese for the patient who consciously or unconsciously exploits the health-care delivery system. He has multiple complaints, but little or no organic disease. Synonyms for the overutilizer are "the hypochondriac," "the neurotic," "the crock," etc. Basically, this is the patient who comes to the physician with multiple somatic complaints.

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Regardless of who pays for medical care, cost-containment becomes the cornerstone of an effective health-care delivery system. Early identification of the overutilizer becomes essential so as to avoid a breakdown in the cost-restraints of DRGs, prepaid health plans, private insurance, or even fee for service delivery systems. The overutilizers seem to thrive in the larger multispecialty clinics where only a few doctors view the patient as a "whole" person, rather than the diseased organ system referred to that specialty. Thus, primary-care physicians who are able to make an early diagnosis are the most effective in treatment. Early in the entry into the system, the primary-care doctor can control clinic- or specialty-shopping.

In most medical clinics, it is estimated that up to 50% of the patients seen have complaints that are primarily functional, (without structural organ disease) which lead to overutilization. This phenomenon may arise from physical, emotional, cultural, social or psychological causes. Physicians tend to be wary of this group of patients because of diagnostic uncertainty and poor response to therapy, as well as the inordinate drain placed on the physician's time and energy. The "sick role" in Western

(Continued on page 167)

MRI CASE OF THE MONTH

ACOUSTIC NEUROMA

Clinical Information: The patient is a 48-year-old male with rightsided tinnitus and hearing loss.

Figure A

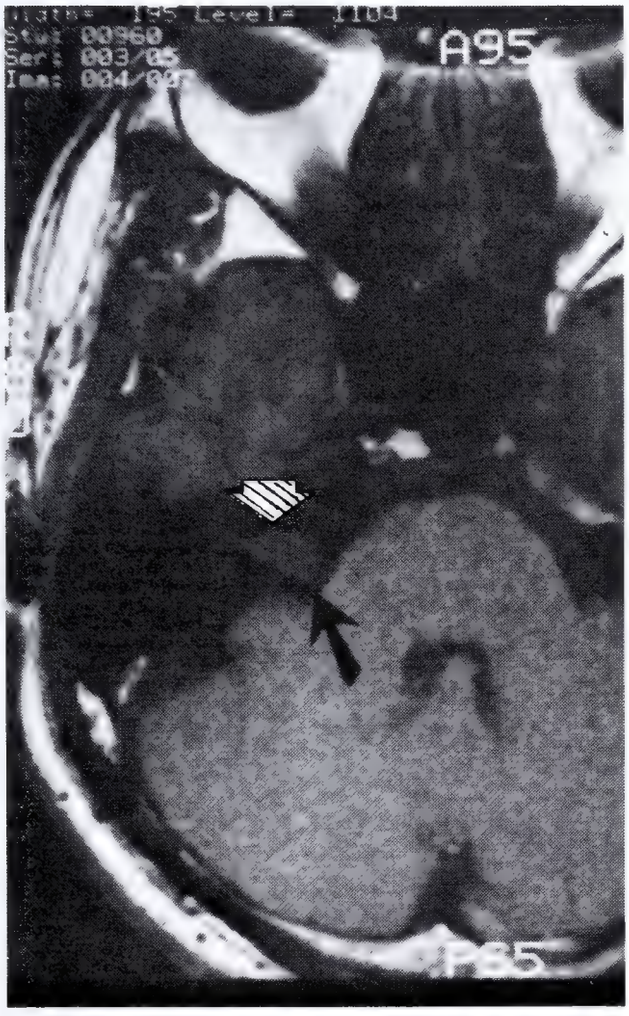
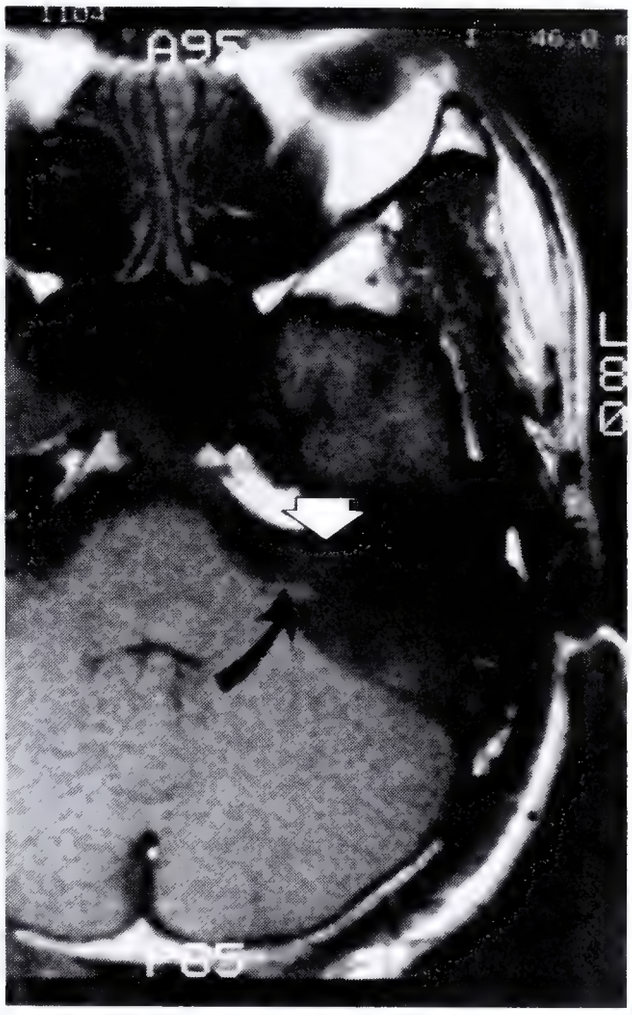


Figure B



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: Figure A. The right internal auditory canal (striped arrowhead) is enlarged due to a small acoustic neuroma which projects into the right cerebellopontine angle (straight arrow).

Figure B. Compare this with the normal left internal auditory canal (white arrowhead) and normal left VIIth and VIIIth nerves (curved arrow).

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Then thousands...



Soon more than a million.

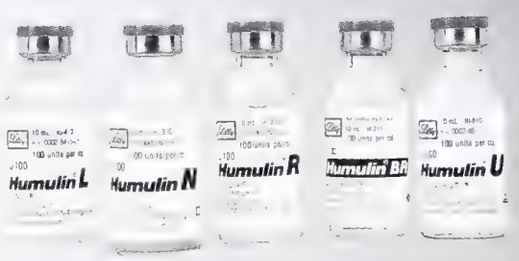
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The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.



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society entitles the patient to be released from many responsibilities, financial, social, family, work, etc. and may provide secondary gains that continue to propel the repetition of his symptom complexes. Needless to say, the physician is the person who does or does not legitimize the sick role[1]. A decision about whether the disease is cured and the patient's ability to return to work (i.e. healthy state) is likewise made by the physician[2].

Every clinician experiences overutilizers in his or her practice and develops an approach to them. In fact, this patient group provides an ongoing management challenge for all physicians. True malingering is very rare, so one must be careful to rule out all psychiatric and medical diagnoses before entertaining *this* diagnosis and must recognize that it is easy to suspect, but almost impossible to prove.

Overutilizers may be classified into: (1) the exaggerators, (2) the somatizers, (3) the body communicators and (4) the "sick" one.

The Exaggerators

These patients exaggerate, amplify, misinterpret or misperceive normal body sensations. Because of conscious or unconscious fear, anxiety, worry, or other emotions, the awareness of normal body functions becomes accentuated, so that the patient is bombarded with multiple somatic sensations, i.e. heart rate, breathing, pressure on the body, aches and pains, etc. This state of increased awareness and exaggerated sensory perception is identified by the patient as disease[3]. This may be furthered by the presence of an actual organic disease, disability, or even chronic pain. A casual, flippant professional approach to this patient tends to "fix" the symptoms and cause further exacerbation of symptoms.

The Somatizers

Anxiety, the body's response to unresolved conflict, regardless of the cause, is internalized and channeled into a body organ and is manifested as a symptom that has a special symbolic meaning to the patient. It is based on a past life experience (an unconscious meaning). If this pattern of coping becomes fixed, it is labeled as a somatization disorder (conversion reaction) (Briquet's Syndrome).[4,5]

Treatment of the somatizer is made easier by understanding the origin of the complaint from the past life experiences. New patterns of adapting and coping must be learned to deal with anxiety rather than internalizing the anxiety. For example, Bob, a 30-year-old steelworker presented himself to the cardiologist because he had recurring episodes of palpitation, angina-like chest pain and shortness of breath. It required a very extensive cardiac workup to determine that his heart was completely normal and that the onset of his palpitation and cardiac symptoms began when his wife announced that she would divorce him. Immediately, he felt that his life might end and he developed the appropriate cardiac symptoms to deliver this message.

The Body Communicator

Body-language communication is a pattern established in early childhood and may persist.[6,7] Physical movements, gestures, facial expressions and behaviors are used instead of words, as the patient retains his childhood communication styles. Regressive childish behaviors tend to appear during stressful life conditions and/or physical illnesses. These patients tend to be overly dependent and their dependency needs are often impossible to meet. Body language is often difficult for the physician to understand, as the patient goes from physician to physician, looking for the "overindulgent" father-figure who can understand his body communication and meet his need.

The Sick One

There are patients who actually are ill and have many complaints either due to physical causes or psychiatric illness. Obviously, patients with chronic illness and multiple system disease are realistically overutilizers. Another part of this group are patients with psychiatric illness and are most commonly depressives,[8] and somatization disorders. The diagnosis of depression is relatively easy to make once the clinician suspects it. The depressed sad affect, psycho-motor retardation, disturbance in sleep, appetite and sex, (usually dimunition), sad mood with frequent spontaneous tearfulness, loss of interest and less enthusiasm help identify those who are depressed. Somatization disorders (primarily conversion) are identified by the regressive child-like, often silly behavior, non-physiological, and non-anatomical physical symptoms and complaints that are over-exaggerated. Inappropriate affective responses to the physical complaints (commonly called La belle indifference) occur.

Anxiety disorders are manifested by symptoms that are the result of excessive autonomic nervous system stimulation[8] and associated somatic complaints. Increasing anxiety heightens somatic symptoms and the urgency of the complaints. Anxiety commonly presents as a fear of impending death or doom. Although changes in lifestyle and adaptations most commonly cause anxiety, physical causes of anxiety that are listed in Table I, must be ruled out. The prevalence of true phobias and panic attacks is occurring with increasing frequency in psychiatric illness and needs early diagnosis. Drug treatments are readily available for this group and provide rather dramatic relief.

TABLE 1

Physical Causes of Anxiety

Neurological:
- Dementia
- Delirium
- Temporal lobe epilepsy
- Post-concussion syndrome
- Intracranial neoplastic lesions
- Encephalopathies (toxic, infectious, and metabolic)
- Intracranial vascular lesions

Metabolic:
- Hyper- and hypothyroidism
- Menopause
- Hypoglycemia
- Porphyria
- Cushing's disease
- Hemolysis and anemia
- Paradoxical drug reactions

Neoplastic:
- Hormone secreting tumors
- Insulinoma
- Carcinoid
- Pheochromocytoma
- Cerebral neoplasms

Respiratory:
- Pneumonia
- Asthma
- Pneumothorax
- Pulmonary embolism
- Pulmonary edema
- COPD (Hypoxia)
- Pneumoconiosis

Cardiovascular:
- Angina
- Mitral valve prolapse
- Arrhythmias
- Congestive heart failure
- Myocardial infarction
- Syncope
- Hypovolemia
- Central nervous system drugs

Psychotic disorders, especially with florrid delusions and hallucinations, are easier to recognize. Slowly developing psychosis,

especially occurring with organic causes, often presents diagnostic dilemmas. Delirium and dementia may present psychotic behavior, but a clouded sensorium manifested by disorientation, confusion, confabulation, and severe impairment of recent memory delineate the organic causes. Prompt referral for psychiatric diagnosis and treatment is essential in such cases.

Management of the Overutilizer

In today's medical climate, the overutilizer represents a major challenge to the dedicated, cost-conscious, liability-aware physician. The medical approach is to discover the etiology and subsequently alleviate the symptoms and cure the "disease." Unfortunately, the complex problems of the overutilizer often are not helped by this approach. When symptoms represent an emotional need rather than a physical disorder, symptom removal or amelioration will provide only transient relief. Although no specific recipe is effective in the treatment of the overutilizer, the following approaches are helpful.

1— **Suspicion is the key to diagnosis.** When the patient gives the initial history, there is often a positive review of systems — i.e., symptoms in every organ system **OR** the patient will show or verbalize disgust with most other previous medical treatment or facilities. If either of the above clues exists, there is a high probability that the patient is an overutilizer. Therefore, a special regimen should be arranged for the management.

   a. **Alter the traditional question/answer medical history taking** by moving to the use of the **unstructured interview.** This is done by occasionally asking unstructured questions — e.g., "tell me about the pain," and then wait for spontaneous replies. At the same time observe the patient's affective responses, non-verbal clues and personality patterns of expression. Past medical history, past personal, social, and legal history, as well as developmental history are important. Particular emphasis needs to be placed on the identifiable psychosocial stressors "by the physician" obtaining a history of the life events. Usually there is limited time during appointments; subsequent appointments can be made to complete the diagnostic evaluation and to arrange for a therapy program.

2— The second step is **to detect all clinically significant organic disease.** This is accomplished by doing a complete physical exam, appropriate laboratory tests and X-rays, plus indicated special exams and consultations.

3— **Make a definitive diagnosis,** both in medical terms and language that the patient understands. Every effort should be made to avoid premature diagnosis. Be aware that it may take a series of visits to adequately understand the dynamics of the patient's symptoms.

4— Once the diagnostic process is completed, and all necessary consultations obtained, **further diagnostic examinations should cease.** When the diagnosis is made, organic disease is spelled out as such and the functional symptoms explained as a nervous reaction to either the organic illness or to life stressors. Open, candid, and forthright explanations prove to be the most effective.

The medical treatment program should be minimized to deemphasize its importance. In doing so, psychosocial stressors (conflicts) are emphasized to the patient and worked through, so the patient can adapt to these stressors. Keep drug therapy limited to the essentials and avoid polypharmacy and polysurgery. Occasionally, it is helpful to include spouses and families in the treatment program. Emphasis on "healthing versus disease" should be inaugurated along with a program of healthy lifestyles.

The overutilizer may need treatment within medical specialties, including psychiatry, but the primary physician must serve as the central core in patient care; otherwise, the patient may feel abandoned, experience insecurity, and increase the demands on the health-care delivery system. The primary-care physician needs to avoid being overly optimistic and "rescue" the sick one, but be realistic in understanding his patient's suffering and discouragement. Reassurance and false hope rarely help.

It is important for the physician to remain aware of his own feelings. He must learn to deal with his own frustration, anger and resentment. It may be necessary to discuss these problem patients with other physicians, nurses and health-care personnel in order that adaption to this stress can be made easier.[8] Otherwise, professional decisions may be made as the result of emotions rather than mature clinical judgment.

Summary

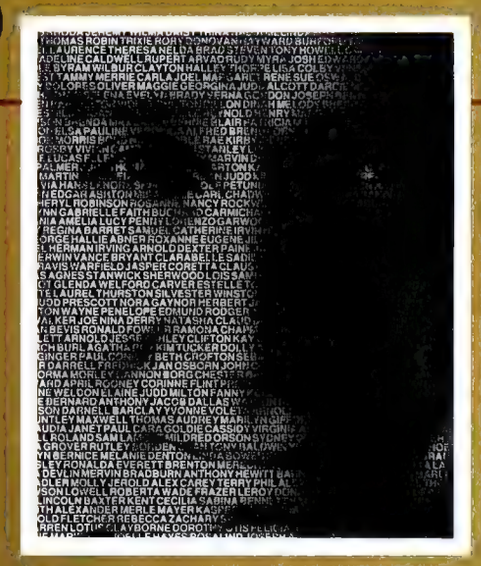
Current psychological understanding of "the overutilizer" is available. The decline of fee for service in the medical-care delivery system is contributing to a rapid proliferation of the overutilizer population. This paper presents a *treatment program of care* for this group rather than thinking in terms of *a medical cure.* The artful practice of medicine becomes the central ingredient in patient care.

REFERENCES

1. Ford CV: The somatizing disorders: Illness as a way of life. New York. *Elsevier Biomedical:* 24-35, 1983.
2. Pilowsky I: Abnormal illness behavior. *Br J Med Psychol:* 42:347-351, 1969.
3. Barsky AJ: Patients who amplify body sensations. *Ann Int Med:* 91:63-70, 1979.
4. Ford CV, Folks DG: Conversion disorders: An overview. Psychosomatics: 26:5, 371-383, May 1985.
5. Goodwin GW and Guze SB: Hysteria (somatization disorder). *Psychiatric Diagnosis,* New York, Oxford Univ. Press, 3rd Ed, 1984, 89-108.
6. Brown HN et al: Hypochondriasis. *Ann Int Med:* 141:723-726, 1981.
7. Mechanic D: Social psychological factors affecting the presentation of bodily complaints. *NEJM:* 286:1132-1139, 1972.
8. Lesse S: Masked depression — a diagnostic and therapeutic problem. *Dis Nerv Syst:* 29:169-173, 1968.
9. Gorlin R, Zucker H: The physician's reaction to patients — a key to teaching humanistic medicine. *NEJM:* 308:1059-1063, 1983.

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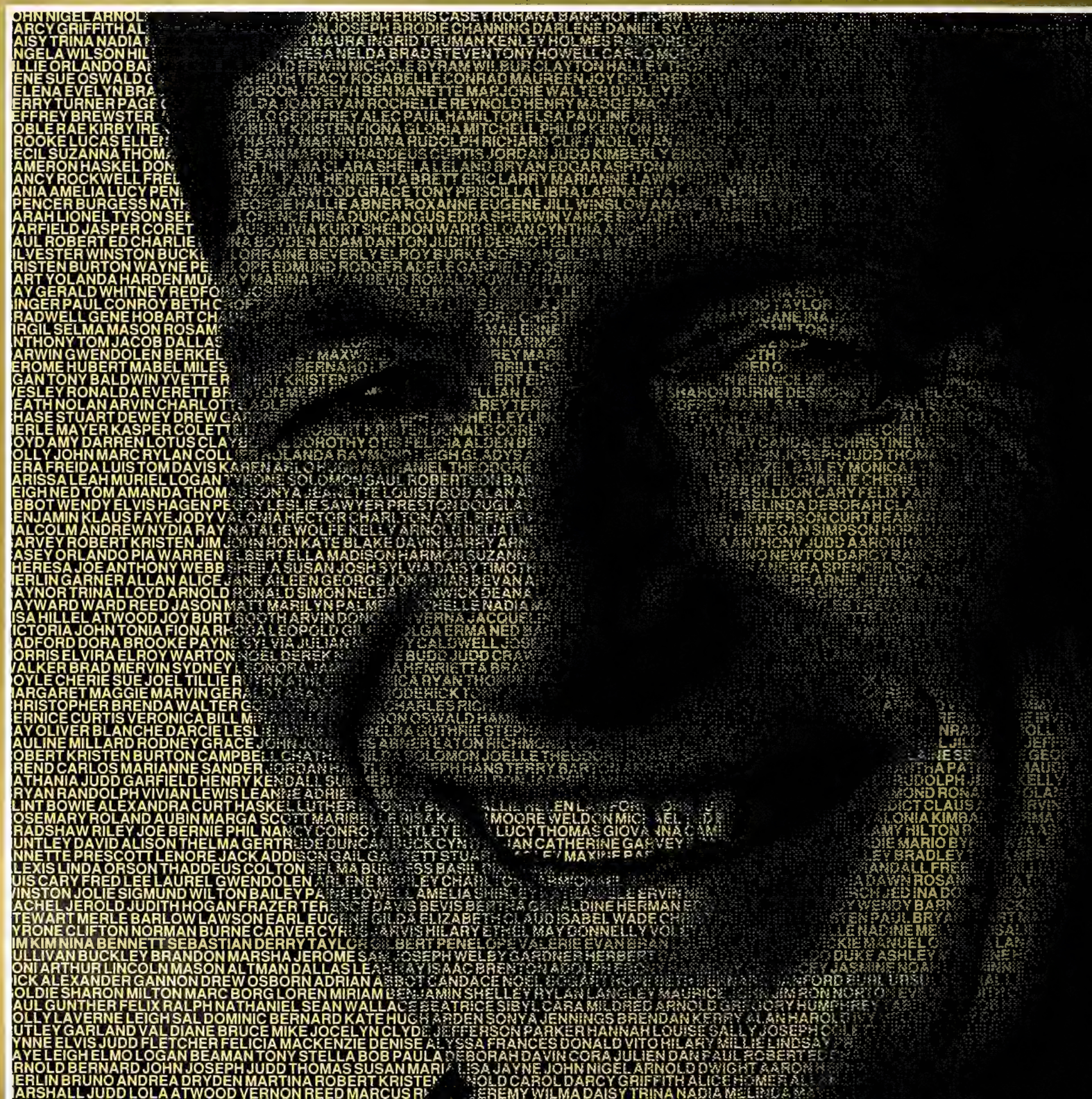
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In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

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...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

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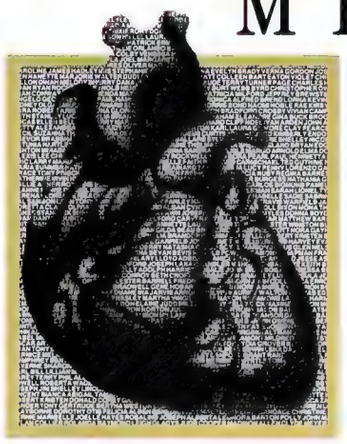
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60 mg 80 mg 120 mg 160 mg*

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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The First Heart Transplant Operation in Hawaii and the Prophylactic Use of Monoclonal Antibodies (OKT3): A Case Report

Ricardo J. Moreno-Cabral, MD
Livingston M.F. Wong, MD
J. Judson McNamara, MD
Stewart Y. Matsumoto, MD

Transplantation of the heart emerged as an established procedure around the world following the clinical introduction of cyclosporin in 1980 at Stanford University.[1] In January 1984 we began organizing a heart transplant program at Saint Francis Hospital in Honolulu, Hawaii; at the time, we were listed by the International Society for Heart Transplantation as Center #34. When our first transplant took place on March 10, 1987, we had become Center #88.

Saint Francis Hospital has been involved in organ transplantation since 1969, when the first kidney transplant in Hawaii took place. More recently, bone marrow transplantation was also introduced at Saint Francis Hospital.

In preparation for the first heart transplant operation, key members of our team visited Stanford University Medical Center. Included were operating-room and intensive-care-unit nurses, as well as members of the pathology and engineering departments. During these visits, first-hand information was obtained by observing transplant operations and postoperative care. Stanford provided valuable assistance for the engineering modifications in the intensive-care and step-down units. This included remodelling these rooms to provide positive pressure, and the installation of separate air-conditioning with a three-filter system to assure 99.9% air filtration and particle retention in order to minimize the risk of nosocomial infections.

During 1984 and 1985 the transplant team members met regularly. Departments involved included hospital administration, nursing, social services, laboratory, dietary, engineering, cardiology and cardiac surgery. During this time protocols were developed according to Stanford guidelines, and the surgical team began practicing donor and recipient operations in collaboration with the kidney transplant team. In August 1984, all cardiologists in the State of Hawaii were informed about the cardiac transplantation program.

In December 1986, a 50-year-old patient with end-stage, dilated cardiomyopathy was first evaluated as a potential candidate for cardiac transplantation. He was formally accepted in January 1987, following admission for recurrent congestive heart failure.

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Case Report

A 50-year-old man with a history of hypertension had been followed since 1983 with a diagnosis of cardimyopathy and moderate ventricular dysfunction. On December 12, 1986, he

was admitted to the Queen's Medical Center in severe congestive failure. An echocardiogram showed deterioration of his ventricular function and severe ventricular dilatation. Catheterization data are shown in Table 1. The pulmonary vascular resistance was normal.

TABLE 1
Cardiac Catheterization Data

Site	Pressure	Saturation
Right Atrium	14/13/13	47%
Right Ventricle	47/13, 3	
Pulmonary Artery	48/28/35	46%
Pulmonary Wedge	29/36/33	
Left Ventricle	116/31, 6	
Aorta	115/77/90	93%
Cardiac Output = 4.0 l/min		
Cardiac Index = 2.2 l/m^2		

In January 1987, the patient was re-admitted twice to the Queen's Medical Center in severe congestive heart failure refractory to maximal medical therapy. Acute myocardial infarction and recent pulmonary embolism were ruled out, and he was formally accepted as a transplant candidate. The main reservation by the transplant team regarding eligibility was progressive renal dysfunction secondary to his chronic low-output state. During his second admission, his creatinine had risen to 2.6, making him a borderline candidate for transplantation. He was discharged from QMC on a regimen of apresoline, furosemide, lanoxin, Isordyl and Coumadin, and remained in functional class IV. He could walk only 40 or 50 feet before becoming dyspneic and could sleep only one or two hours at a time and then only by sitting in a chair. He had lost his appetite and had rapidly become extremely emaciated. His outlook for survival was certainly grim.

On March 10, 1987, a cardiac donor become available. The donor was a teen-age boy, the victim of a traffic accident. He had been declared brain-dead by two different specialists. His blood group was the same as the patient's, and as soon as the lymphocyte cross-match test was reported negative, the donor was transported by ambulance to Saint Francis Hospital and the recipient prepared for surgical intervention.

The operation began at 9 p.m. and ended by 1 a.m. Surgical procedures on the donor and recipient were carried out by two separate teams in adjacent operating rooms. The surgical technique was similar to that reported by Lower and Shumway[2] with Barnard's modification for the right atrial incision in the donor heart in order to avoid the sinus node. The total ischemic time was 54 minutes and bypass time one hour and 58 minutes. The new heart resumed sinus rhythm promptly following electrical cardioversion, and its rate was kept at about 110 beats per minute with intravenous Isuprel. The heart/lung machine was stopped shortly after 11 p.m. that day, as the healthy donor's heart easily took over the responsibility for the patient's circulation. Incision closure was routine and the patient was transferred to the intensive-care unit in stable condition. Immunosuppression was effected with corticosteroids, azathioprin and cyclosporin, following the Stanford protocols. In addition, monoclonal antibodies (OKT3) were used prophylactically for 14 days, beginning on the third postoperative day (Table 2).

Postoperative recovery was entirely uneventful. Isuprel was discontinued when the heart rate stabilized between 90 and 100 beats per minute by the fifth postoperative day. A regimen of physical therapy was begun early, and the patient discharged from the hospital on the 22nd postoperative day. Endomyocardial biopsies done with a disposable bioptome (Figure 1) at weekly intervals showed no evidence of rejection. Pre- and postoperative chest roentgenograms are shown in Figure 2.

Following discharge from the hospital, the patient developed low-grade fever secondary to an urinary tract infection; this responded quickly to appropriate antibiotic therapy. Subsequent biopsies have shown only one late episode of mild rejection. This was treated with pulse methylprednisolone (1 g/day x3) on an outpatient basis. The rejection episode was controlled by means of therapy; subsequent biopsies have shown no new rejection episodes. The patient has been free of infections and in functional class I to the time of this report.

TABLE 2
Immunosuppression

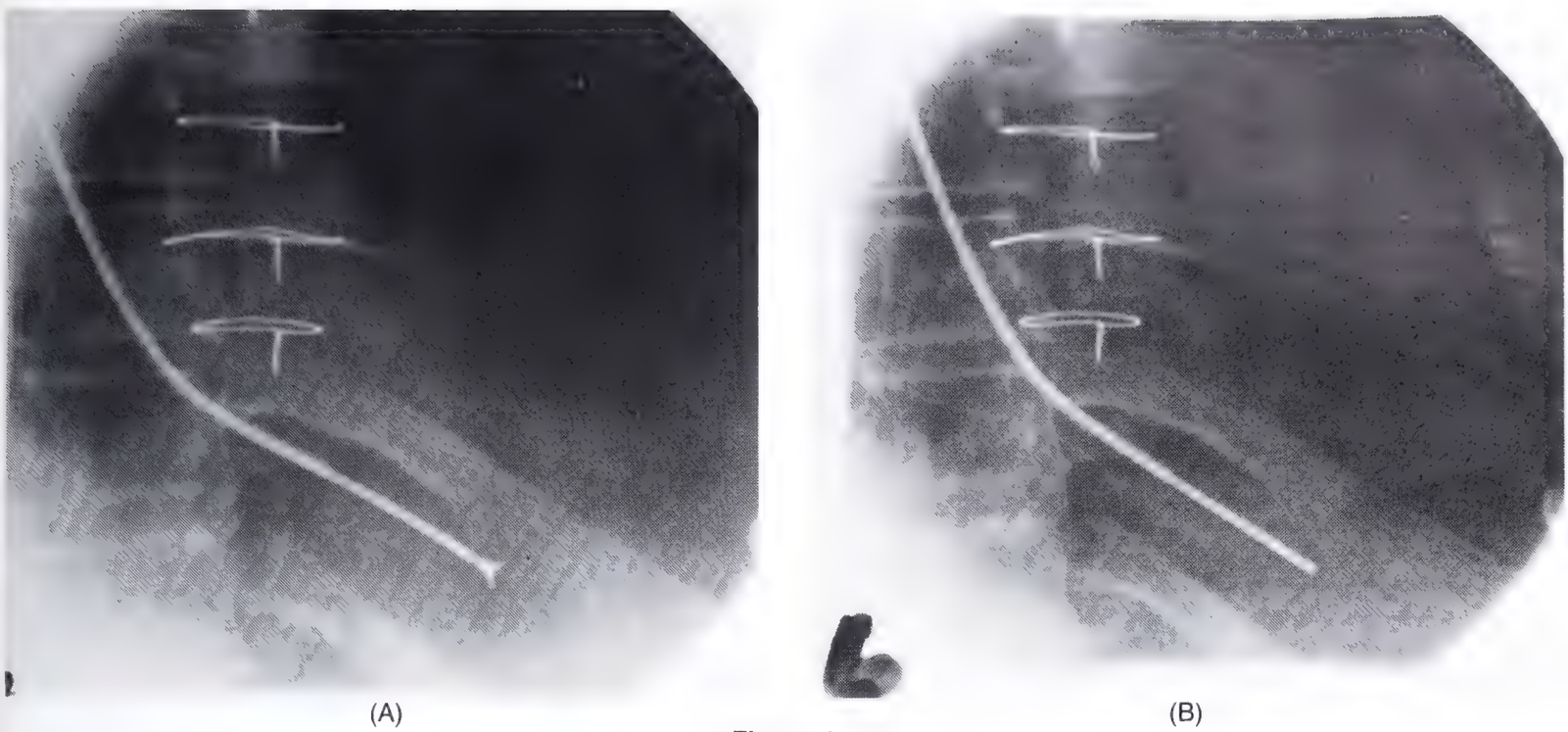
	Loading Dose	Maintenance
Cyclosporin	5-10 mg/kg preop	6 mg/kg adjust to plasma level of 50-250 ng/ml
Azathioprin	4 mg/kg preop	1-1.5 mg/kg adjust to WBC >5000
Methylprednisolone	1 gm intraop	125 mg I.V. qd × 5
Prednisone		1 mg/kg taper to 0.2 in 6 wks
OKT3*	5 mg/d on 3rd postop day	5 mg/d for 13 days

*Medications one hour before the first three OKT3 doses: Ranitidine hydrochloride 50 mg i.v.; Diphenhydramine hydrochloride 50 mg p.o., Methylprednisolone sodium succinate 125 mg i.v.; and Acetaminophen 625 mg p.o.

Discussion

Cardiac transplantation is no longer considered an experimental procedure but rather a therapeutic intervention for selected patients with end-stage cardiac disease untreatable by conventional medical or surgical therapy. It is now a relatively common operation; during 1986 over 1,000 transplant procedures were performed in the United States alone.

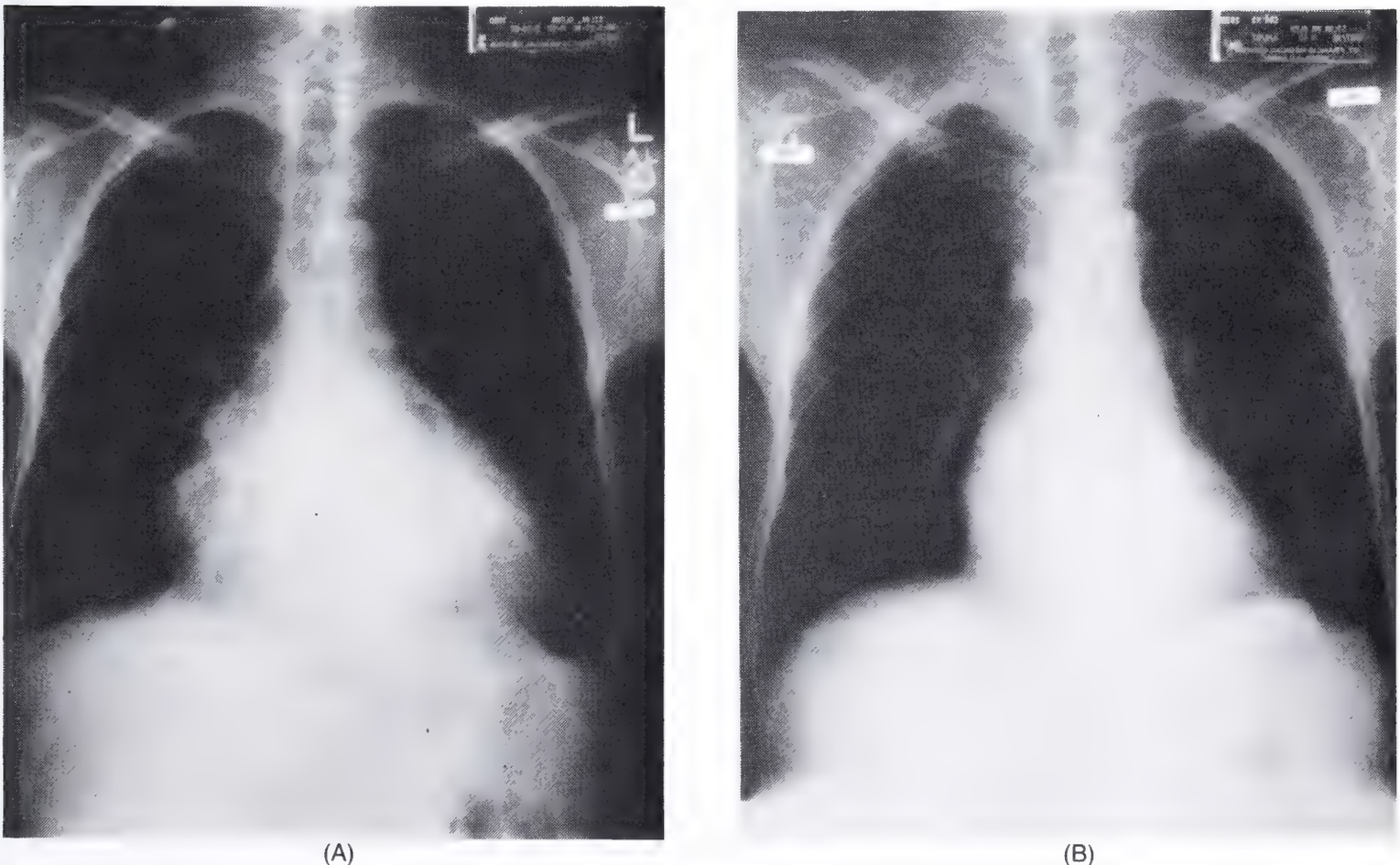
Current criteria for selection of recipients are listed in Table 3. To summarize, patients must have end-stage, isolated cardiac disease in functional class III or IV, untreatable by conventional therapy and with a life expectancy of less than 6 to 12 months; recipients should have low pulmonary vascular resistance and be free of malignancy or other significant illness, as noted in the table.



(A) (B)

Figure 1

Fluoroscopic image of bioptome in the open (A) and closed (B) position for endomyocardial biopsy of the right ventricle. The bioptome is inserted through the right internal jugular vein under local anesthesia.



(A) (B)

Figure 2

Preoperative (A) and postoperative (B) chest roentgenograms showing difference in heart size before and after cardiac replacement.

TABLE 3

Current Criteria For Recipient Selection

1. Under 60 years of age
2. End-stage heart disease untreatable by other means
3. Pulmonary vascular resistance <6-8 Wood units
4. Life expectancy of less than 6 to 12 months
5. Normal or reversible liver and kidney function
6. Psychosocial stability
7. ABO and lymphocyte cross-match compatibility with donor

Contra-indications

1. Active infection
2. Active peptic ulcer
3. Recent pulmonary emboli
4. Malignancy
5. Insulin-dependent Diabetes Mellitus
6. Systemic illness that would compromise recovery or survival

For many years only patients over 15 and under 55 years of age were accepted for transplantation at Stanford University, but more recently the age limits have been expanded at various centers, from the neonate to 60 or even as old as 65 years of age. Similarly, donors were rejected if over 35 years of age but many centers now accept donors up to 45 years of age, provided the cardiac function is normal and coronary artery diesease is ruled out by coronary angiography.

The stimulus to the development of a heart transplant program in Hawaii was not only the recent improvement in results worldwide, but the fact that its geographical isolation demands self-sufficiency in this field. Many patients from Hawaii who could benefit from this procedure would not survive a trip to the mainland. Saint Francis Hospital is a well-recognized transplantation center with an on-going cardiac surgery program. An easy way to initiate a new cardiac transplant unit is to take advantage of the existing facilities and professional expertise already in place in a seasoned transplant center.

Our patient was fortunate to have this operation available here, as he was rapidly reaching an inoperable state due to end-organ dysfunction; on the day of the transplant operation his creatinine was 2.1. After his transplant he quickly returned to functional class I although his renal dysfunction has not improved.

His smooth postoperative course can be attributed to a better understanding of postoperative care, largely as a result of the Stanford experience, and to the use of safer immunosuppressive drugs such as cyclosporin and OKT3. The best recent results have been achieved in protocols that include low-dose triple therapy, i.e., corticosteroids, azathioprin and cyclosporin as indicated by the International Society for Heart Transplantation registry in 1986.[3]

A recent advance, as a result of hybridoma technology, is the development of the use of monoclonal antibodies such as OKT3 (muromonab CD3, Ortho Pharmaceutical Corporation, Raritan NJ), a murine IgG2a monoclonal antibody to the T3 (CD3) antigen of human T-cells, which functions as an immunosuppressant. OKT3 binds to the T3 antigen, a glycoprotein associated with the antigen recognition structure of T-cells essential for signal transduction. When OKT3 is injected intravenously, the T-cells virtually disappear from the circulation within minutes, probably due to opsonization, entrapment and destruction by the spleen and liver. The absence of peripheral T-cells eliminates one of the most important mechanisms of rejection; in contrast to steroids and polyclonal antibodies (such as antithymocyte globulin) which affect other tissues, OKT3 is cell-specific and once it is discontinued the T-cell population returns to normal. This agent was initially used in rejection of kidney transplants[4] and subsequently in cardiac rejection unresponsive to conventional therapy.[5] A few centers have begun to explore its role as a primary immunosuppressive or "prophylactic" agent in the early postoperative period following cardiac transplantation.[6,7] Their great potential for more precise immunosuppression, leading to early graft acceptance with minimal risk of infection, will undoubtedly open a new era in clinical transplantation.

We elected to use OKT3 at 5 mg/day for 14 days, starting on the third postoperative day (Table 2). This allowed us to decrease the dosages of cyclosporin and azathioprin, which was desirable on account of the preoperative renal dysfunction. In fact, azathioprin was discontinued temporarily early postoperatively in order to avoid excessive bone marrow suppression, since renal function was severely impaired. The only episode of rejection was mild, occurring late after discharge, and easily controlled by an increase in corticosteroids.

A potential disadvantage of the prophylactic use of OKT3 is the development of anti-OKT3 antibodies, which are detectable by the enzyme-linked immunosorbent assay (ELISA).[8,9] This may limit its usefulness in subsequent severe rejection episodes, although early experience in San Diego has shown effectiveness in suppressing rejection when given a second and third time. We were impressed with the lack of side-effects and the smooth postoperative course, including the easily treatable late rejection episode, and we did not observe the previously reported potential complication of pulmonary edema when it is given to fluid-overloaded patients following a kidney transplant. As a precaution, we "premedicated" the patient with antihistamines and steroids before the first three doses of OKT3 to counteract the reaction to the sudden release of lymphocyte breakdown products (Table 2). Other monoclonal antibodies, such as OKT12, have also shown promising results in kidney transplant rejection and may be useful for cardiac transplant patients when OKT3 is not effective. Further alternatives, if monoclonal antibodies fail to suppress severe rejection, include the use of polyclonal antibodies, such as anti-lymocyte (ALG) or antithymocyte (ATG) globulins.[5]

Remarkable advances in the field of cardiac transplantation since the 18-day survival of the first patient 20 years ago have allowed expansion of this mode of therapy. OKT3 has been very effective in controlling cell-mediated rejection and it is possible that, with its prophylactic use, the traditional biopsy within the first week after transplant will no longer be necessary as a routine procedure, and the hospital stay for the average heart-transplant patient may be shortened to two weeks instead of the usual four to six weeks in the cyclosporin era. There is currently an immediate 10-15% risk of early graft failure, and the worldwide average one-year survival rate is about 80%. A few transplant centers are showing survival rates in the 90% range; the San Diego program, for example, which began in 1985 at Sharp Memorial Hospital, has been exceptionally fortunate in having no deaths in the first 26 operations. One patient from the Stanford series is still alive 18 years after transplantation. Most transplanted patients enjoy active lifestyles in functional class I.

Late death following heart transplant is usually related to infection, rejection, malignancy or coronary atherosclerosis, but any length of survival for the terminally ill is certainly worth the effort. For the patient, the heart transplant operation simply means the difference between life and death.

ACKNOWLEDGMENTS

The authors would like to acknowledge the generosity of the parents of Michael Benson, the unlimited support from Sister Maureen Keleher, and the valuable assistance from Drs. Richard Pang, Clifford Chock, Jeffrey Lau, Young K. Paik, Stephen Berman, Dan Margulies, Eric Matayoshi, and the staff members of the Saint Francis Hospital immunology laboratories; Richard Chaney and Norita Miller, cardiac perfusionists; Mrs. Irma Miller and the Operating Room nursing staff; intensive and intermediate care unit nurses; members of social services, psychology, engineering, dietary, radiology, public relations, clerical and housekeeping departments. Their contributions were all essential to the success of the operation.

REFERENCES

1. Oyer PE, Stinson EB, Jamieson SE, et al. One year experience with Cyclosporin-A in clinical heart transplantation. *Heart Transplant* 4:285, 1982.
2. Lower RR, Shumway NE. Studies on orthotopic transplantation of the canine heart. *Surg Forum* 11:18, 1960.
3. Kaye MP. The registry of the International Society for Heart Transplantation. *Heart Transplant* 6:191, 1987.
4. Ortho Multicenter Transplant Study Group. *N Engl J Med* 313:337, 1985.
5. Baumgartner WA, Augustine S, Borkon, et al. Present expectations in cardiac transplantation. *Ann Thorac Surg* 43:585, 1987.
6. Oyer PE. Personal communication.
7. Burton N. Personal communication.
8. Chatenoud LMF, Baudrihaye N, Chkoff N, et al. Immunologic follow-up of renal allograft recipients treated prophylactically by OKT3 alone. *Transplant Proc* 15:643, 1983.
9. Jaffers TJ, Colvin RB, Cosimi JV, et al. The human immune response to murine OKT3 monoclonal antibody. *Transplant Proc* 15:646, 1983.

Emergency Treatment of the Neuroleptic Malignant Syndrome

Naleen N. Andrade, MD*

This paper will present: (a) A case report and recommend operational criteria for the diagnosis of Neuroleptic Malignant Syndrome; (b) a clinical assessment of the syndrome that encourages a creative problem-solving perspective, rather than the common sophisticated physician-technician approach; and (c) a treatment protocol based on a review of the current literature.

Introduction

Few psychiatric emergencies create more fear and confusion than the neuroleptic malignant syndrome (NMS). Not uncommonly, patients will present with temperatures of 103° to 105° F, severe extrapyramidal dysfunction resulting in trismus, lead-pipe rigidity, choreiform movements, laryngospasm and opisthotonos, autonomic dysfunction such as tachycardia, unstable blood pressure, diaphoresis, dyspnea or tachypnea, urinary incontinence and fluctuating levels of consciousness.[1-7]

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The syndrome affects 0.5% to 1.4% of individuals on neuroleptic medications,[1] with men affected two to five times more often than women.[1,3] Twenty percent of diagnosed cases result in death, usually from respiratory arrest, myoglobinuria with acute renal failure, or cardiovascular collapse.[1]

Cases of schizophrenia — the most common psychiatric diagnosis for which neuroleptic medication is the treatment of choice — that are under treatment, have an incidence ranging from 0.42 to 0.51 per 1,000, whereas the prevalence of schizophrenia in the United States is between 0.6% and 3% of the population.[8] Based on prevalence rates, 1.2 million to 6 million Americans may be suffering from schizophrenia and require neuroleptic treatment. This means that an estimated low of 6,000 to a high of 84,000 Americans could become victims of the neuroleptic malignant syndrome.

For Hawaii, this translates into 30 to 40 cases per year, most of whom will be seen by Emergency Room Physicians.

Case Report

A 22-year-old Caucasian, unemployed man with a known history of "paranoid schizophrenia" had been treated with Fluphenazine decanoate depot injections, 2 cc every two weeks, plus Fluphenazine HCL 5 mg P.O. TID for his psychosis, Benztropine for extrapyramidal side effects and Amoxapine for depression.

Two days prior to admission the patient took an overdose of Fluphenazine tablets and a bottle of Sominex (Diphenhydramine sleep preparation) in a suicide attempt. On the day of admission he smoked a "large amount" of marijuana. He was brought into the emergency room by the police, screaming nonsensical words, eyes glaring, severely agitated.

Initial examination by the emergency-room physician showed the patient to be diaphoretic, tremulous, unresponsive to questions and with no signs of trauma. Vital signs: Temperature 104.7° F, respirations 60, pulse 128, blood pressure 180/80. Pupils were 6 mm in diameter. The rest of the exam was within normal limits. He was given Physostigmine 4 mg IM with improvement in one hour, in that he could explain what happened to him. He was oriented as to persons, place and time.

I examined the patient about 1 hour and 15 minutes after the physostigmine was given. His vital signs included a temperature of 104.7°, P 138 (a heart monitor showed sinus tachycardia), BP 160/104. He was disheveled, in physical restraints because of severe agitation, and diaphoretic with skin hot to touch. His body went through one- to three-minute episodes of opisthotonus and trismus, alternating with writhing choreiform movements and flexor-extensor posturing. A physical exam was significant for Pupils 3 mm in diameter, equal and reactive to light. Lungs were clear; breathing was shallow and rapid with intercostal muscle contractions. Abdominal exam revealed hyperactive bowel sounds.

Neurological exam showed symmetrical, hyperactive deep-tendon reflexes. In between episodes of muscular dysfunction, the patient had pronounced cogwheeling of elbow joints and bilateral sustained foot clonus. Plantar reflexes were downgoing.

A mental status exam was significant for slurred shouting of nonsensical words, alternating twice during the course of 30 minutes with slurred, normal volume, logical sentences, asking what was going on in his body. The patient's level of consciousness fluctuated during the 30-minute period, from being sleepy and disoriented in all spheres, to being awake, alert and oriented as to person, place, month and year.

Laboratory values on admission were CBC: Hg/Hct = 16.1/47.4, WBC = 19.0 with a normal differential; electrolytes were normal; creatinine was high at 1.8; calcium and magnesium values were mildly high at 10.8 and 2.8 mg/dl respectively. CPK was elevated at 697 (Normal = 35-232 IU/L).

The diagnosis of Neuroleptic Malignant Syndrome was made at this time. The patient, who could now swallow (see Treatment), was started on Dantrolene 75 mg IV. Twenty-five minutes later the patient's vital signs were: Temperature 97.4° pulse 96, respirations 20 and regular, blood pressure 128/90. He was awake, alert and oriented. Hyper-reflexia, clonus and cogwheeling persisted, along with moderate choreiform movements, but no trismus or opisthotonus. Dantrolene was continued at 60 mg IV every six hours. The patient was transferred to the Medical Intensive Care Unit.

Diagnostic Criteria

Operational criteria for the diagnosis of Neuroleptic Malignant Syndrome have been proposed by Pope et al.[1] All of the three following signs must be present for diagnosis: Hyperthermia of 37.5° C or higher, of unknown etiology; severe extrapyramidal side effects, characterized by at least two of the following: Lead-pipe muscle rigidity, cogwheeling, sialorrhea, oculogyric crisis, retrocollis, opisthotonus, trismus, dysphagia, choreiform or dyskinetic movements and flexor-extensor posturing; autonomic dysfunction characterized by at least two of the following: Hypertension (at least 20 mm rise in diastolic pressure above baseline), tachycardia (at least 30 beats above baseline), tachypnea (at least 25 respirations/minute), prominent diaphoresis and incontinence of bowel or bladder.

Clinical Presentation

A common response by the physician who is confronted by a case of NWS is initial confusion, followed by a frantic search for a therapeutic recipe to resolve the problem. I would like to suggest an alternative approach that would challenge a problem-solving clinician.

When one looks at the signs and symptoms of NMS, what is striking is that there is an imbalance or dysregulation of function rather than a lack of function. The extrapyramidal dysfunction indicates a disruption of the basal ganglia. This is where complex voluntary movements that allow for smooth motor actions and automatic movements are integrated.

Temperature dysregulation would suggest problems with the brain's thermoregulatory center. The autonomic dysfunction is manifested by alternating sympathetic (sweating, tachycardia, dilated pupils) and parasympathetic responses (bradycardia, urinary and fecal incontinence), i.e., both cholinergic and noradrenergic neurons are being stimulated. This temperature and autonomic dysfunction would suggest that the affected anatomic site would be the control centers of the hypothalamus.

The third anatomic site that is involved in the acute phase of NMS would be the musculo-skeletal system — in particular the sustained muscular contractions that can cause evulsions and subluxations — increase in body temperature, and rhabdomyolysis with its resulting myoglobinuria and renal failure.

Thus, in treating an acute episode of NMS the clinician — after initiating the ABCs of emergency life support — is ultimately concerned with stabilizing the function of the Basal Ganglia, hypothalamus and musculo-skeletal system.

Pathophysiology

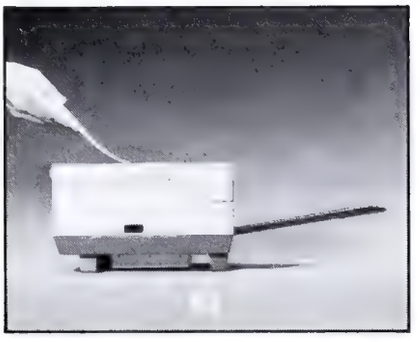
Based on clinical studies[1-7,9-12] three hypotheses have been discussed in the literature.

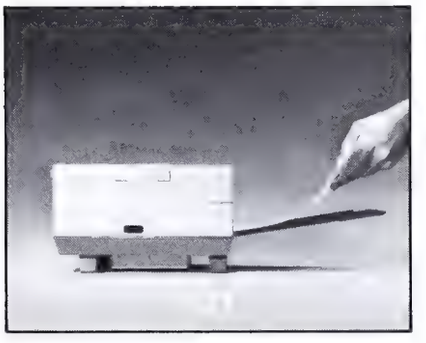
The first, and most promising hypothesis involves the underactivity of the Dopaminergic System within the basal ganglia and the hypothalamus caused by a neuroleptic dopamine blockade. A successful therapeutic strategy has been to remove the dopamine blockade by stopping neuroleptics and administering dopamine agonists such as Bromocriptine. Important to note is the need for a dopamine agonist, since stopping neuroleptics does not have an immediate effect because of the relatively long half-life of most neuroleptics. In addition, antiparkinsonian medications such as Benztropine, which control extrapyramidal side effects, should be continued.

The second hypothesis suggests that the sarcoplasmic reticulum, the organelle within muscle cells that regulates the release of calcium ions that cause muscle fibers to contract, releases too many calcium ions causing sustained contractions and fever. This hypothesis is supported by the successful response of some NMS patients to Dantrolene, a skeletal-muscle

(Continued on page 185)

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relaxant that acts by blocking the outflow of calcium ions from the sarcoplasmic reticulum.

The third, and least tested hypothesis is Sandyk's[9] endogenous-opioid system dysfunction. Sandyk postulates that an overactivity of beta-endorphins decreases dopinergic activity (causing a relative dopamine blockade), vis-a-vis a primary dopamine blockade caused by neuroleptics; while an underactivity of beta-endorphins causes the autonomic dysfunction observed.

Thus, a proposed treatment strategy would be to decrease the activity of beta-endorphins by administering naloxone, an opioid antagonist, and increase beta-endorphin activity with narcotics. Studies supporting this hypothesis have not yet been published.

It is possible that all three hypotheses may simultaneously be in action and contribute to the Neuroleptic Malignant Syndrome. This thought would suggest that neuroleptics may not be the only medications associated with NMS. Other medications that have an effect on the sarcoplasmic reticulum, dopamine neurons and beta-endorphins of the hypothalamus and basal ganglia, could potentially cause NMS.

Treatment

A review of the literature[3,5-7,11,12] suggests the following treatment protocol after the diagnosis of NMS has been made:

1—Discontinue neuroleptics.

2—Initiate life-support measures. Maintain respiratory and circulatory systems, hydration, reduction of fever, etc.

3—IF PATIENT IS ABLE TO SWALLOW:
Bromocriptine 7.5 - 60 mg/day in divided doses every eight hours. Note: Bromocriptine is produced only in oral form.

4—IF PATIENT IS UNABLE TO SWALLOW:
Dantrolene 0.8 - 2.5 mg/kg body weight, administered intravenously every six hours. Note: It is not recommended that Bromocriptine be crushed and administered through a nasogastric tube because of the high risk of muscle contractions that could cause regurgitation and aspiration.

5—When the patient on Dantrolene is able to swallow, begin Bromocriptine at previously prescribed dosage, and taper off and discontinue Dantrolene.

6—Treatment on Bromocriptine should continue for 10 days following clinical improvement.

Conclusion

The patient presented is one of an estimated 6,000 to 80,000 Americans at risk for developing Neuroleptic Malignant Syndrome. Review of the case report shows that the operational criteria for diagnosis of NMS, proposed by Pope et al., is useful especially in an emergency situation.

Crucial to the recovery and survival of NMS patients is early diagnosis and prompt treatment. We have suggested assessment, diagnostic and treatment plan protocol that should contribute to the expertise of the problem-solving clinician. This approach is essential in view of the possibility of NMS occurring in patients on other psychotropic medications.

REFERENCES

1. Pope HG, Keck PE, et al: Frequency and Presentation of Neuroleptic Malignant Syndrome in a Large Psychiatric Hospital. *Am J Psychiatry* 143(10):1227-1233, Oct 1986.
2. Sternberg DE: Editorial, Neuroleptic Malignant Syndrome: The Pendulum Swings. *Am J Psychiatry* 143(10):1273-1275, Oct 1986.
3. Levinson D, Simpson G: Neuroleptic-Induced Extrapyramidal Symptoms With Fever. *Arch Gen Psychiatry* 43:839-848, Sep 1986.
4. Clark T, Ananth J, Dubin S: On the Early Recognition of Neuroleptic Malignant Syndrome. *Int'l J Psychiatry Med* 15(4):299-310.
5. Lazarus A: Neuroleptic Malignant Syndrome: Detection and Management. *Psychiatric Annals* 15(12):706-711, Dec 1985.
6. Levinson JL: Neuroleptic Malignant Syndrome. *Am J Psychiatry* 142(10):1137-1144, Oct 1985.
7. Mueller PS: Neuroleptic Malignant Syndrome. *Psychosomatics* 26(8):654-662, Aug 1985.
8. Babigian HM: Chapter 15.2, Schizophrenia: Epidemiology. *Comprehensive Textbook of Psychiatry/IV,* Kaplan HI and Saddock BJ, Editors. William and Wilkins, Baltimore, pp 645-647, 1985.
9. Sandyk R: Neuroleptic Malignant Syndrome and the Opioid System. *Medical Hypothesis* 1985;17:133-138.
10. Henderson VW, Wooten GF: Neuroleptic malignant syndrome: A pathogenetic role for dopamine receptor blockade? *Neurology* 1981;31:132-137.
11. Toru M, Matsuda O, Makiguchi K, et al: Neuroleptic malignant syndrome-like state following withdrawal of antiparkinsonian drugs. *J Nerv Ment Dis* 1981;169:324-327.
12. Roth SD, Addonizio G, Susman V: Letter, Diagnosing and treating Neuroleptic malignant syndrome. *Am J Psychiatry* 143(5):673, May 1986.

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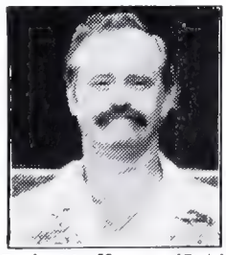
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STEPHEN R.P.K. BRADY, MD

Those involved in medical billing may be interested to know that the first textbook on CPT and HCPCS Coding has been donated to the Hawaii Medical Library and is available for use there. This book was published by Medical Administration Publications in Illinois.

THE HONOLULU MEDICAL GROUP—is offering a way to help those who have resolved to lose a significant amount of weight. A free orientation to the OPTIFAST Program is held monthly at 7 p.m. at the Honolulu Medical Group Clinic, 550 South Beretania Street.

The OPTIFAST Program is a safe and effective, medically-monitored weight loss program specifically designed for people 50 pounds or more overweight. The goal of the six-month program is sustained weight loss in order to reduce the health risks of obesity. Over 80% of those in the program lose at least 40 pounds; more importantly, new food attitudes and habits are developed for keeping extra weight off.

"Because of the intensity and length of the program, supported by qualified health professionals, the OPTIFAST Program makes a strong impact on weight control and long term success. The results are consistently better than I've ever seen in my career as a registered dietitian," says Pat Cantin, RD, Program Director of the OPTIFAST Program.

For more information and reservations call the Nutrition Services Department at the Honolulu Medical Group, 537-2211, Ext. 703.

STRAUB FOUNDATION ANNOUNCES FUNDING FOR RESEARCH PROJECTS—Straub Foundation, a Hawaii-based, nonprofit organization devoted to medical research and education, has announced that it is accepting proposals from local health care professionals who wish to have research projects funded.

The Foundation, which seeks to find ways to improve health care in Hawaii while keeping medical costs affordable, has resources available to finance limited costs of projects to be undertaken for the last half of 1988.

Research proposals may be retrospective or prospective in nature and may be run up to three years. Projects should culminate in the production of an event or publication.

The Foundation will provide resource support up to $5,000, including staff for epidemiological study design, statistical analysis, database management and clerical help, as well as materials purchase and assistance in publishing project results. Principal investigators will receive no salary.

Projects funded by Straub Foundation in recent years have included: Clinical studies of the cost-effectiveness of varied methods of varicose vein treatment, directed by vascular surgeons; the development of a model for cost-effectiveness research, directed by administrators; the search for psychological predictors of medical utilization rates, directed by psychologists, and a study to discover ways to prevent hospital inpatient falls, directed by nurses.

Interested individuals or organizations who wish to apply for research funding may request application instructions by contacting the Foundation at 524-6755. The proposal submission deadline is April 5, 1988, and project investigators will give oral presentations of their proposals to the Foundation's Research and Education Committee in April, 1988.

AIRPORT URGENT CARE

Marc E. Kross, MD, PhD, has been named Medical Director for the Honolulu Airport Urgent Care, a full-service occupational medicine center located near Honolulu International Airport, announced Sharen Franklin, Vice President/General Manager of the center.

Dr. Kross joined Airport Urgent Care in Honolulu at its opening in May. He was previously associated with King's County Hospital Center, New York Hospital, Cornell University Medical Center, New York Downstate Medical Center and Martin Luther King Hospital in Los Angeles.

"We are very fortunate to have a physician with the qualifications of Dr. Kross," says Airport Urgent Care General Manager Franklin. "He has specialized training and background in burns and trauma which are extremely valuable to an occupational medicine facility such as ours."



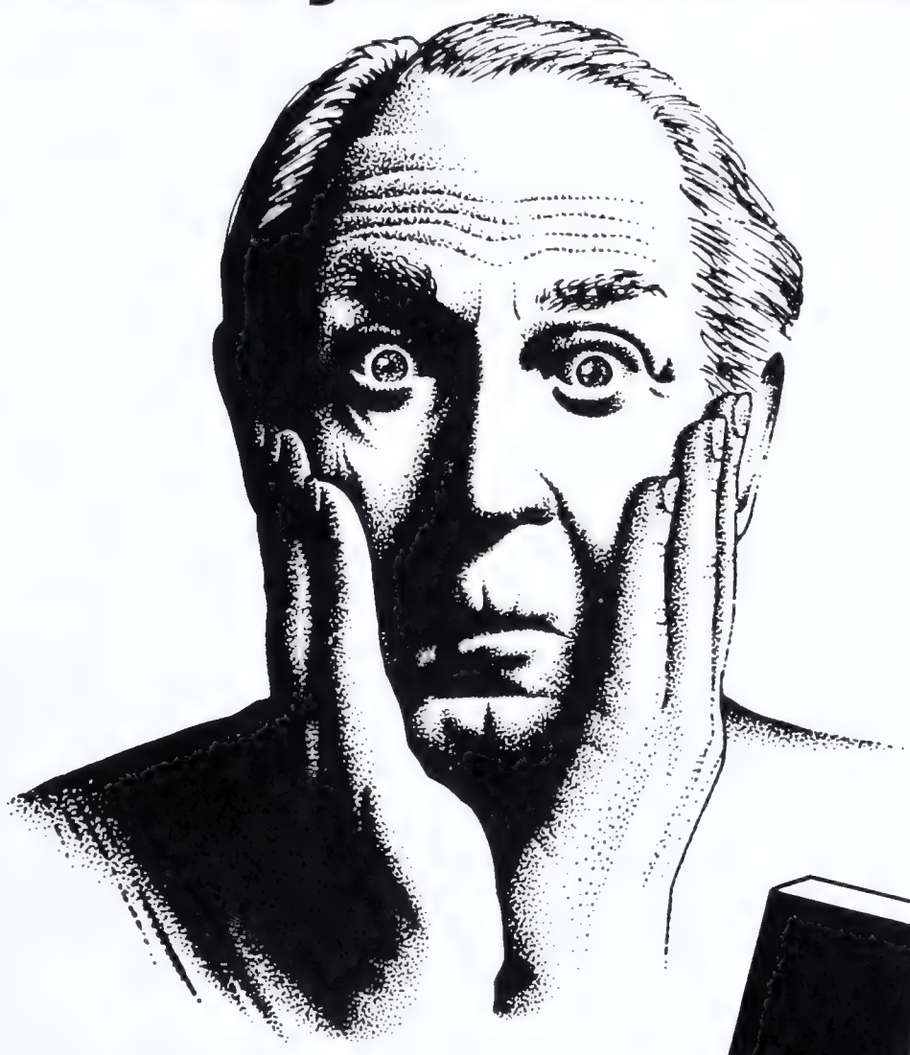
Mark E. Kross, MD, PhD

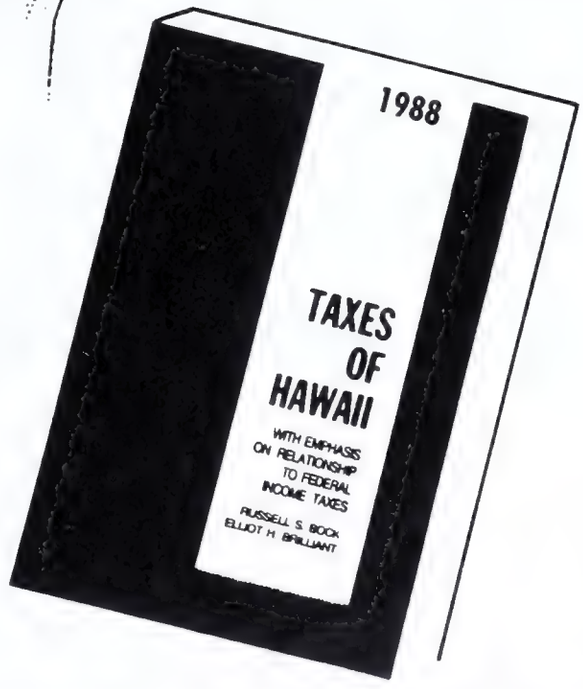
THE HONOLULU NUTRITION PROGRAM—is sponsoring three Showcase of Services for Senior Citizens on April 23 at Windward Mall, May 14 at Kahala Mall and May 21 at Pearlridge Mall, Phase I. They would like to invite you to participate in these showcases. Space is limited at the centers; therefore, requests will be filled on a first come, first serve basis.

If interested, please call Suzette A. Yamasaki, Nutrition Director, at 531-0555.

(Continued on page 192)

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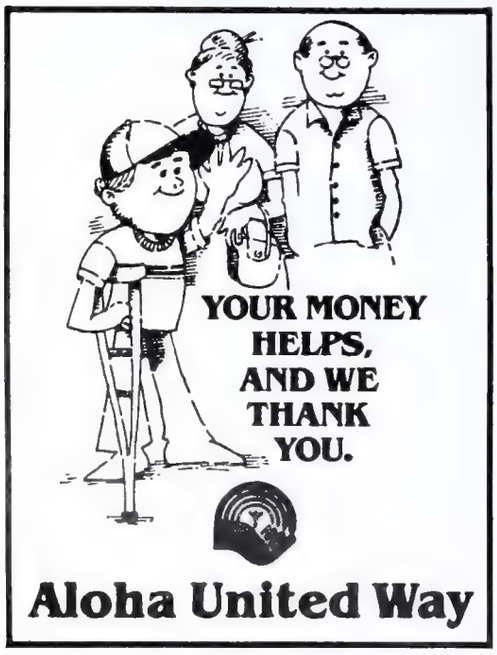
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OTED

(Continued from page 190)

THE DEPARTMENT OF HEALTH OFFERS FREE AIDS TESTING AT THE HONOLULU MEDICAL GROUP—A representative from the Department of Health will provide free, anonymous, number-only (no names), Human Immunodeficiency Virus (HIV) counseling and testing at The Honolulu Medical Group. By opening alternative testing sites, the Department of Health hopes to increase awareness and to offer counseling to antibody positive individuals to avoid exposing others; and if not infected now, how to avoid contracting the virus. Testing will be conducted every Wednesday between 9 a.m. and noon. To schedule an appointment, call 537-2211, Ext. 444. Anyone interested in testing but preferring a different site can call the Department of Health at 735-5303.

General information on AIDS can be obtained by calling the Life Foundation at 924-2437, the Waikiki Health Center at 922-1313 or the Department of Health at 735-5303.

SENATOR INOUYE FUND-RAISING DINNER TO BENEFIT MEDICAL RESEARCH—Proceeds from a Kuakini Foundation fund-raising dinner honoring U.S. Senator Daniel K. Inouye will be used as seed money to build a research center at Kuakini Medical Center.

The dinner was held on Friday, February 12, in the Hilton Hawaiian Village Hotel Coral Ballroom. Senator Inouye was recognized for his outstanding contributions and achievements as a Senator for the State of Hawaii and for his leadership as Senior Senator in Washington, D.C.

Funds from the dinner will benefit the Kuakini Foundation, a subsidiary of Kuakini Health System, to help build a facility which will house research labs and internationally recognized research programs such as:

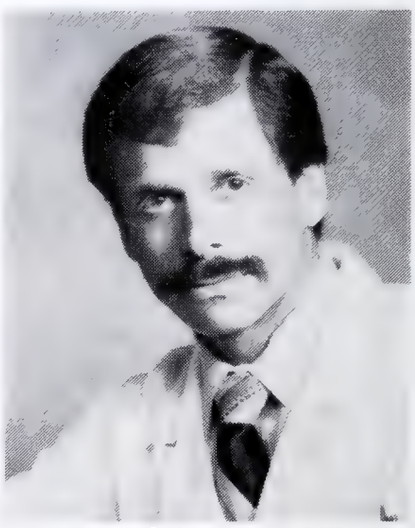
- The Japan-Hawaii Cancer Study — Supported by the National Cancer Institute, this study identifies risk factors of common cancers by studying over 8,000 men and women of Japanese ancestry. It's the only program of its kind in the nation.
- The Honolulu Heart Study — Funded by the National Heart, Lung and Blood Institute, this study observes the incidence of heart disease and stroke among about 8,000 Oahu men of Japanese ancestry. It is the oldest project of its kind in the state.
- The Osteoporosis Research Study — Funded by the National Institute of Aging, this study involves over 2,500 participants and identifies osteoporosis risk factors and develops risk prediction guidelines. It is one of the largest group studies of its kind in the world.

MAUI PLASTIC SURGERY CORP. EARNS HAWAII'S FIRST AAAAPSF NATIONAL ACCREDITATION—KAHULUI, Maui — The American Association for Accreditation of Ambulatory Plastic Surgery Facilities (AAAAPSF) has granted its first and only Hawaii accreditation to Maui Plastic Surgery Corporation, an outpatient facility located in the Kahului Building at 33 Lono Avenue.

The only national accreditation organization in the United States specifically for plastic surgery facilities, AAAAPSF employs on-site inspection of medical facilities to judge the safety and comprehensiveness of procedures, equipment, staff, patient education and follow-up.

Maui Plastic Surgery Corp. provides cosmetic plastic surgery for patients throughout the Islands. Dr. Larry Schlesinger, who heads the facility, received his M.D. from the Medical College of Virginia, where he was president of its medical honors fraternity and graduated at the top of his class. He did his general surgery residency at Tripler Army Hospital and Stanford University Medical Center and was awarded the position of visiting professor of surgery at the University of Oklahoma, where he served as chief resident in plastic surgery.

Certified by the American Board of Plastic Surgery, Inc., Dr. Schlesinger has headed Maui Plastic Surgery Corp. since 1980. He served as chairman of the Department of Surgery at Maui Memorial Hospital from 1983 to 1985, and is currently chief of the department's section of plastic surgery.



Larry Schlesinger, MD

(Continued on page 194)



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A PUBLIC SERVICE MESSAGE FROM THE INTERNAL REVENUE SERVICE

OTED

(Continued from page 192)

DEPARTMENT OF DEFENSE AWARDS CHAMPUS REFORM CONTRACT—WASHINGTON—In January, the Department of Defense awarded a health care contract of unprecedented nature and scope, worth potentially three billion dollars over five years.

The contract — awarded to Foundation Health Corporation of Sacramento, California, and a consortium of health care providers in California and Hawaii — is designed to provide alternative health care delivery for approximately 865,000 CHAMPUS beneficiaries in California and Hawaii. The Queen's Health Care Plan of Honolulu is one of five companies who will be working together to implement the CHAMPUS Reform Initiative in California and Hawaii.

CHAMPUS, which stands for "Civilian Health and Medical Program of the Uniformed Services," is the federal government's medical benefits program which generally covers dependents of active-duty personnel, military retirees and their dependents, and survivors of deceased military personnel.

The alternative program — called the CHAMPUS Reform Initiative (CRI) — will allow CHAMPUS beneficiaries the option to obtain medical care from statewide panels of providers at minimal out-of-pocket costs. Currently, CHAMPUS beneficiaries may either use military treatment facilities at little or no cost or seek treatment from private practice providers, but pay 20% to 25% of allowable charges plus a $50 to $100 yearly deductible for out-patient care.

Under the CRI program, CHAMPUS users can join an HMO-type program or use a panel of providers. In the HMO-type program CHAMPUS users will enjoy increased benefits and only nominal copayments. Even for those not opting to enroll in the HMO program, CHAMPUS beneficiaries can reduce their cost by electing to receive health care services from the selected panel of providers.

Some of the managed care systems employed by the Foundation and its partners include preferred contracts with medical facilities and physicians, effective hospital utilization, second opinion programs, peer review, patient care management, data analysis, physician profiling, Health Care Finders and military/private-sector resource management.

Locally, The Queen's Health Care Plan is a preferred provider organization which serves approximately 23,000 enrollees. It has a provider network which

includes seven Hawaii hospitals — Castle Medical Center, Kahi Mohala, Kapiolani Medical Center for Women and Children, Molokai General Hospital and Wilcox General Hospital. Over 350 prominent physicians of every major specialty located throughout the State of Hawaii also participate in the network, as well as numerous ancillary providers such as pharmacies and laboratories. The Queen's Health Care Plan expects to increase the size of the network to accommodate CHAMPUS beneficiaries.

LAMAZE CLASSES OFFERED AT THE HONOLULU MEDICAL GROUP AT PALI PALMS—The Honolulu Medical Group at The Pali Palms Plaza will be offering Lamaze classes for expecting parents. The cost for the six-week Lamaze series is $60 per couple.

The instructor for the Lamaze series is Jayme Ellerbe, RN, MS. For more information about the classes, please call Jayme at 263-0498.

NATIONAL VOLUNTEER PROJECT PROVIDES EYE CARE FOR 200,000 ELDERLY CITIZENS—Eyesight lost through some diseases can be preserved and possibly restored at any age — just ask the more than 200,000 elderly citizens nationwide who have dialed 1-800-222-EYES (3937).

By calling this toll-free Helpline number, eligible Hawaii callers receive a referral to a local ophthalmologist who has volunteered to provide needed medical eye care through the National Eye Care Project. The ongoing public service program is designed to bring medical eye care and information to the nation's disadvantaged elderly.

Program sponsors — the Foundation of the American Academy of Ophthalmology and state ophthalmology societies — aren't stopping at 200,000 callers, according to Shigemi Sugiki, MD, president of the Hawaii Ophthalmological Society.

Older Americans suffer more than half of the blinding eye diseases that are diagnosed in the U.S. each year — a statistic ophthalmologists are determined to change through the project.

"Ophthalmologists estimate that about half of elderly blindness can be prevented by early diagnosis and treatment," said Dr. Sugiki. "The National Eye Care Project has certainly contributed to this effort by providing medical information and removing financial obstacles that



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may discourage elderly people from seeking much needed care."

Since the project began in June 1986, 474 Hawaii residents have called the Helpline, and 313 have been referred for a comprehensive medical eye exam and treatment for potentially blinding eye diseases.

To be eligible for project services, a caller must be age 65 or older, a U.S. citizen, and no longer have access to an ophthalmologist he or she has seen in the past.

Services provided by the volunteer ophthalmologist are offered at no out-of-pocket cost to the patient. For this project, volunteer ophthalmologists are accepting Medicare and/or other health insurance assignment as payment in full for their services. If the patient lacks insurance coverage, medical eye care is provided without charge.

Hospital charges, prescription drugs and eyeglasses are not covered by the program.

The National Eye Care Project is open weekdays, 8 a.m. to 5 p.m.

GENERIC DRUGS FILLING MORE PRESCRIPTIONS IN AMERICA TODAY—LAKE BUENA VISTA, Florida — Saving money on prescription drugs by using generic brands is a practice of almost half of the Americans questioned in a recent Epcot Poll survey of 3,509 Walt Disney World visitors.

As part of a special medical survey, the Epcot Poll asked participants how often they have their prescriptions filled with generic drugs. Forty-seven percent indicated they ask for generic drugs "frequently" or "sometimes," though 42% said they "rarely" or "never" use generic drugs. The breakdowns were similar for both men and women.

A ONCE-A-WEEK CONTRACEPTIVE PATCH—REDWOOD CITY, California — January 22, 1988 — The prospect of a skin patch designed to deliver a controlled dosage of contraceptive hormones transdermally is not that far away, according to David de Weese, Chief Executive Officer of Cygnus Research Corporation, a Northern California-based manufacturer of transdermal drug delivery systems. The new patch could be on the prescription market in three to five years.

The proposed contraceptive patch is the subject of a co-development venture between Family Health International, one of the world's leading contraceptive

development and evaluation organizations, and Cygnus Research. Cygnus is presently testing the patch for feasibility.

The patch would last seven days and would be replaced once a week for three weeks. A drug-free patch would be worn for the fourth week to allow for menstruation to occur in much the same way as an oral contraceptive does. The difference, however, is that the woman is freed from the need to take a pill each day. Instead, taking the medication will become a weekly event, greatly increasing its convenience while reducing the risk of missed doses.

CANCER CENTER REPORTS THAT HAWAII RESIDENTS CAN CUT THEIR RISK OF CANCER—Experts at the Cancer Research Center of Hawaii (CRCH) announced today that most Hawaii residents can reduce their risk of getting cancer by making certain life-style changes that will add up to a longer life.

"Many chronic illnesses are a direct result of people's lifestyles," said CRCH Acting Executive Director Tom Humphreys. "Cancer is no exception." Eighty percent of cancer cases are tied to the way people live. For example, the cigarettes they smoke, the foods they eat, and how much time they spend in the sun all affect their likelihood of getting cancer.

"Fully 30% of all cancer deaths and 85% of lung cancers are due to smoking," according to Humphreys. Smokers are twice as likely to develop cancer than are nonsmokers, and 10 times more likely to get lung cancer. "Most of these cases could be prevented," Humphreys said, "if people stopped smoking or using tobacco in any way. One of the best ways to protect yourself from cancer is never to start smoking or, if you do smoke, to quit now."

Researchers believe that about one-third of all cancer deaths may be related to the foods people eat. "The average American diet contains 40% fat," Humphreys said. Studies suggest that some components of our diet, such as vitamins and fiber, may protect against disease, while others, such as fats, may increase the risk.

The CRCH recommends that people reduce the amount of fat in the food they eat or prepare; fat content should be 30% or less of daily calories. Fresh fruits and vegetables such as broccoli, cabbage, carrots, oranges and melons are high in Vitamins A and C and have been shown to inhibit cancer. Eating these foods as well as foods high in fiber such as

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breads, cereals and noodles may lower the risk of cancers of the digestive system.

More than 400,000 Americans — light and dark skinned alike — are diagnosed with non-melanoma skin cancer every year, and most cases are preventable, according to Humphreys. Over 90% of all cases are caused by overexposure to the sun. "Several simple precautions, including using a sunscreen, wearing a hat, sitting under an umbrella, and avoiding the noon-day sun make it possible to spend time in the sun without undue skin cancer risk," recommended Humphreys. "This is especially true for local residents who are exposed to the intense sub-tropical sun found in Hawaii."

The Cancer Information Service (CIS) can provide Hawaii residents with up-to-date information on how to cut their risk of cancer and live a healthier life. To learn more, call the CIS weekdays at 524-1234. Neighbor Island residents can call collect.

The Cancer Information Service is a program of the Cancer Research Center of Hawaii and is funded by the National Cancer Institute.

KUAKINI PUTS A LID ON SMOKING—(December 30, 1987) — Effective January 1, 1988, cigarette, cigar and pipe smoking will be prohibited in all Kuakini Health System facilities except for the coffee shop. Smoking will also be allowed in open-air areas. This new smoking policy applies to everyone who uses the Health System facilities including employees, patients, visitors, physicians and vendors.

An in-house committee evaluating the System's smoking policy concluded that Kuakini has a responsibility to maintain a healthy environment for all who use the facilities. The committee called smoking a "preventable health and safety hazard" that would be a hindrance to a healthy hospital environment.

The committee anticipated some opposition to the new policy but felt the decision was made in the best interest of all concerned. Smoking in Kuakini facilities would be inconsistent with one of the System's main goals — keeping people healthy.

The decision to review the existing policy was prompted by the new state law which regulates smoking in specified public places. Several areas in the hospital are subject to the new law. "No smoking" signs have been put up around the hospital to inform visitors of the new policy.

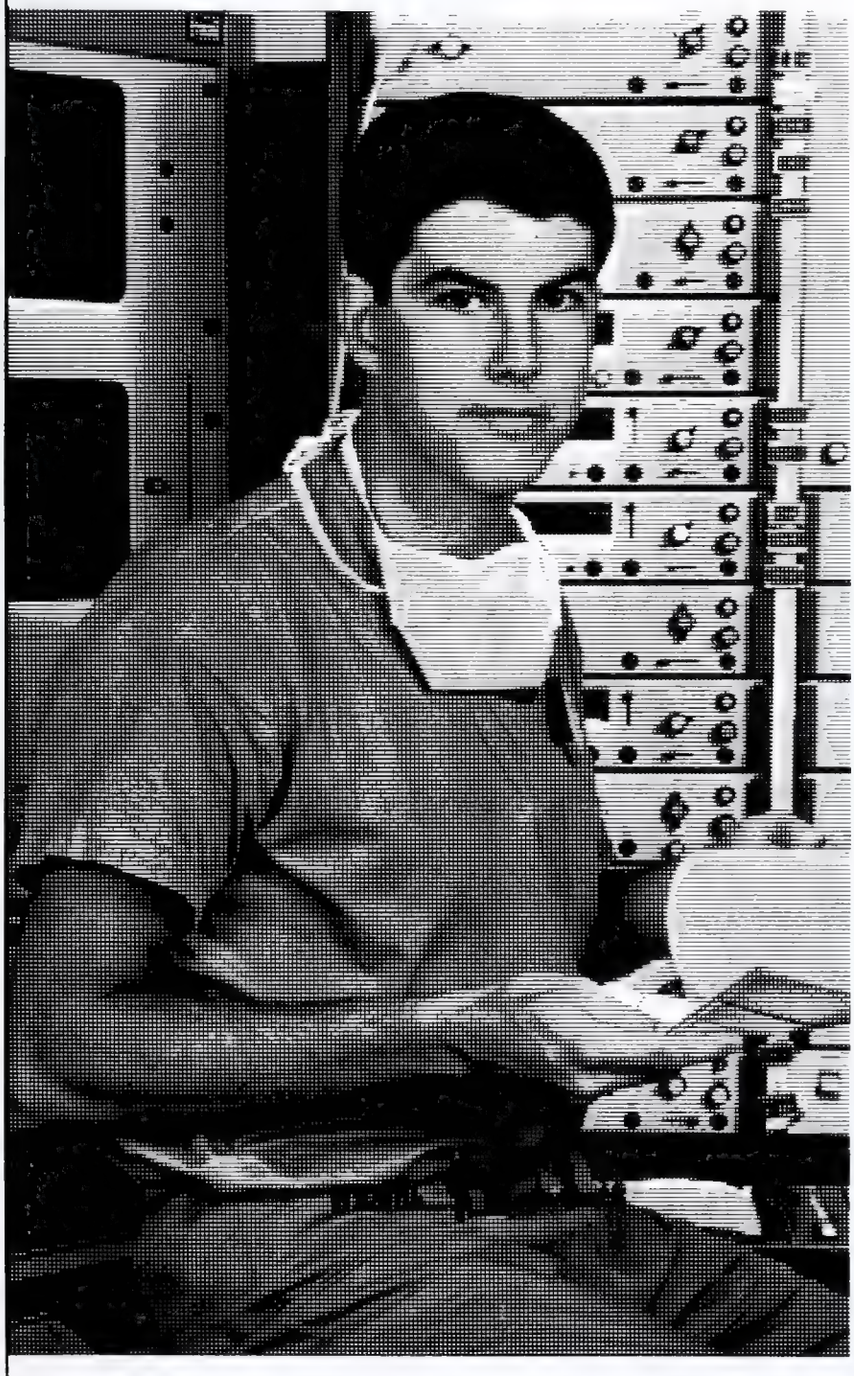
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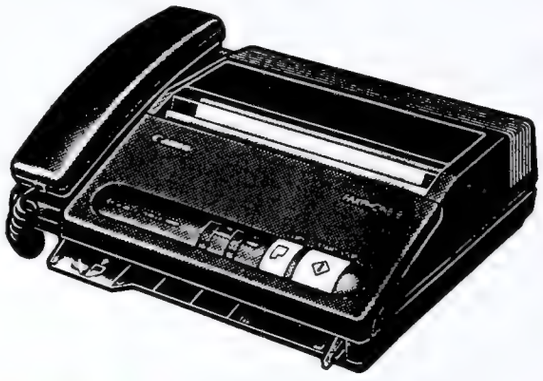


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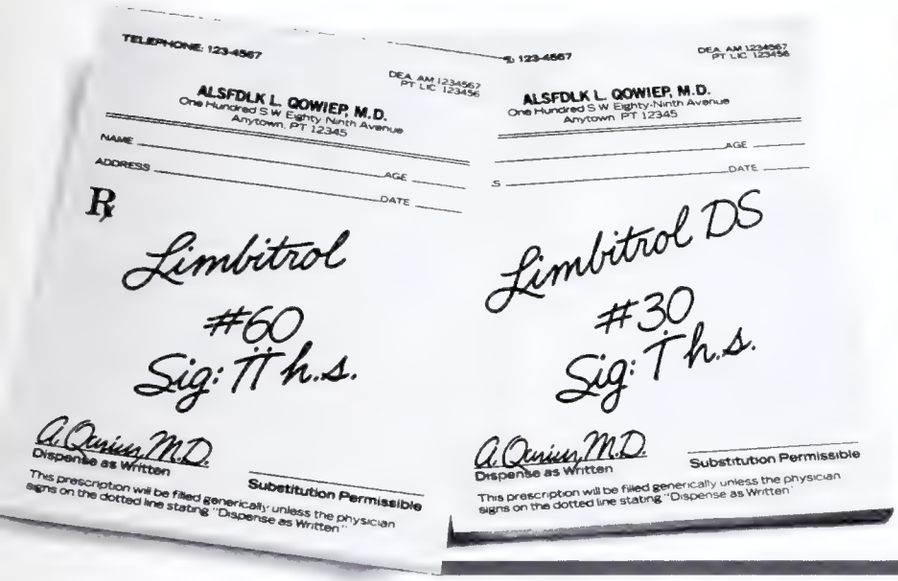


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Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
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Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.
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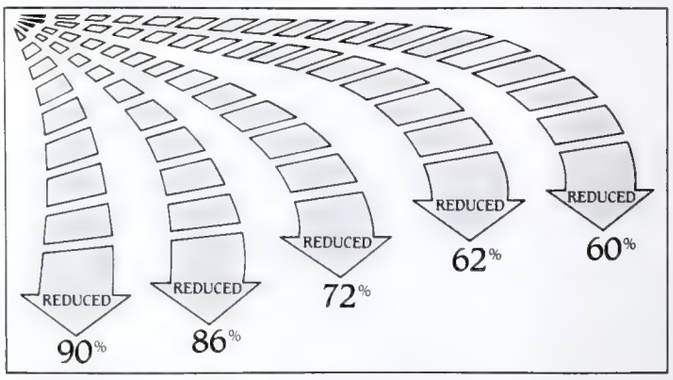
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- First-week reduction in somatic symptoms[1]

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Honoring the Library's 75th and Dr. Charlie Judd Jr.

This issue of the JOURNAL not only celebrates the 75th anniversary of the Hawaii Medical Library, it also commemorates Charles S. Judd Jr., MD, 1920 to 1987.

HML was one of Charlie's pet interests. He was closely associated with it since 1960 and served on its Board of Governors for over 25 years. As a part of his intense interest in the history of medicine in general — what our antecedents have learned is always with us as we continue to learn and to "practice" our profession — he focused his attention on that section of the HML and initiated oral history-taking, recorded on videotapes, in order to preserve the thoughts and feelings of Hawaii's practitioners of the art and science of medicine of the past and present.

Charlie's particular affinity for Hawaiian Queen Emma's Hospital, now known as The Queen's Medical Center of the Pacific, is reflected by QMC's reciprocal commemoration — by its contribution to equip the medical sailing ship Marimed quite generously in Dr. Judd's name. Marimed will bring modern medical technology to the isolated atolls of Micronesia, as an extension or outreach by QMC. This contribution by QMC complements Charlie Judd's devotion to the care of the people of Western Samoa, where he served for several years and where he will never be forgotten, as evidenced by Lance Eve's article.

Dr. Judd's transit as a physician and surgeon in Hawaii and in the Pacific was like that of a brilliant comet, leaving a lasting memory and unblemished respect and love on the part of the many people whose lives he touched.

It was his friend and colleague Norman Goldstein, currently president of the Hawaii Medical Library, who came up with the idea of "celebrating" at one and the same time HML's 75th, Charlie Judd's long association with HML and how these things tie in with Queen's, upon whose lands HML sits and where Charlie largely worked and taught its residents-in-training, as well as the students of the John A. Burns School of Medicine.

The Hawaii Medical Association and its organ, the JOURNAL, are pleased to dedicate this issue to the Hawaii Medical Library and to the memory of Charles S. Judd Jr., MD. We thank Dr. Goldstein for his contribution as special issue editor.

—J.I. Frederick Reppun, MD
Editor

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BRIEF SUMMARY

CONTRAINDICATIONS
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PRECAUTIONS
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Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%)

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OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate

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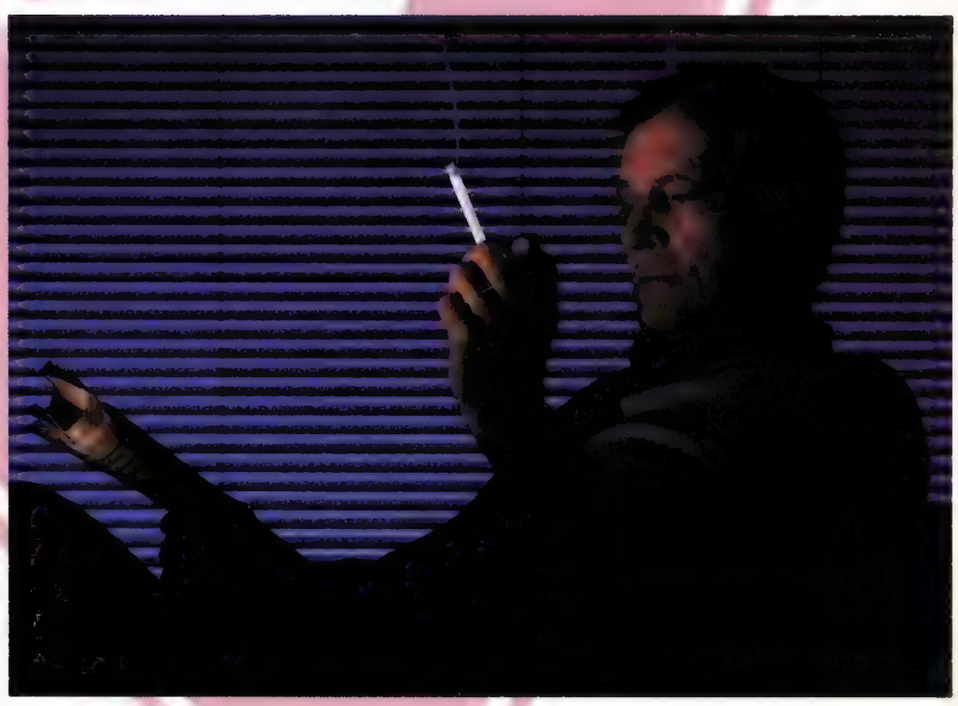
Issued 1/87

References:
1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79 (suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987

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Soldier being examined for effects of high-altitude cerebral edema.

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

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Mahalo to a Mentsh

Mentsh *(German: Mensch — A person)*

1. *An upright, honorable, decent person.*
2. *Someone of consequence, someone to emulate, of noble character.*
3. *A personification of worth and dignity, requiring the highest respect and approbation, totally trustworthy.*

Leo Rosten, in *Hooray for Yiddish!* goes on to say that neither wealth nor status, nor success, nor fame, nor popularity qualify one to be called a "mentsh." The keys to the mentsh status of a person is character, rectitude, responsibility, decorum and generosity of spirit. Rosten considers Abraham Lincoln the model of a mentsh.

Charlie Judd was a mentsh — a true mentsh.

This special issue of the HAWAII MEDICAL JOURNAL is dedicated to the memory of Charles S. Judd Jr., MD.

It is most appropriate that the HMA, the JOURNAL, the Board of Directors of the Hawaii Medical Library and Dr. Judd's many, many friends and associates present this issue in his memory.

Charlie left us on July 23, 1987. No, on second thought, Charlie will never leave us! The lives he saved with his surgery, the lives he touched with his compassion and his teachings will always remind us that he is still with us.

We all wear many hats in our various family, social, religious and professional lives; Charlie Judd had a closet full of hats.

In this issue of the JOURNAL, some of his fellow board members at the Hawaii Medical Library, his fellow physicians, his friends and his minister will share some of their fond memories of a great man, a great physician, a great Hawaiian — a true mentsh — with us.

The Board of Governors of the Hawaii Medical Library, on the occasion of its 75th anniversary, is pleased to dedicate this issue of the HAWAII MEDICAL JOURNAL to the memory of Charles Judd — a member of the Board for 25 years.

The HML has established the Charles Judd Memorial Fund and has named the History of Medicine Collection after Dr. Judd.

Many friends have asked how they can perpetuate Dr. Judd's memory and his love of the History of Medicine. For information about such gifts and bequests, please contact John Breinich at the library, (808) 536-9302.

Mahalo nui loa,



Norman Goldstein, MD
Guest Editor,
HAWAII MEDICAL JOURNAL
President, Hawaii Medical Library Inc.
1221 Punchbowl St.
Honolulu, Hawaii 96813-9990

This year marks the 75th anniversary of the Hawaii Medical Library. Its history is reviewed by Margery Hastert, historian at The Queen's Medical Center. We are honored by including "Reflections" by the "dean of Hawaii architects" and architect of the Hawaii Medical Library, Val Ossipoff.

Another contributor to this special issue is John Breinich, director of the library since 1975, who has been a true diplomat on behalf of the library and of Hawaii, lecturing in Greece and China on medical library practices. John extolls the position of our library in his "Pacific Connection."

Rounding up the articles is one by Robert Grossman, executive director of the Marimed Foundation. Grossman reviews the ship *Tole Mour*, which is the floating health-care center dedicated to the memory of Charlie Judd.

—Norman Goldstein, MD
Special Issue Editor



Charles S. Judd Jr., MD

History of the Hawaii Medical Library

Margery Hastert*

Perhaps the best adjective to describe the early history of the Hawaii Medical Library would be "peripatetic," for in its 75 years of existence, the library has moved seven times — each time to a location on or near Punchbowl Street.

The whole idea started back in 1913 when Dr. Arthur F. Jackson was appointed head of a committee of local doctors to form a medical library. The following fall, Gov. Lucius Pinkham assigned two rooms in the "Bungalow," located on the palace grounds, for the use of the Territorial Medical Society as a library and meeting place. The rooms were refurbished, and Dr. C.B. Cooper donated several hundred volumes from the collection of the late Dr. J.S. McGrew. Mrs. C.B. Wood presented the library of her uncle Dr. Hugo Stangenwald.

However, this arrangement lasted only until 1916 when the library moved to a room in the Queen's Hospital. A report by Dr. W.G. Rogers stated that "$90 had been received for books, but that more money was needed." Dr. W.L. Moore's widow had donated her late husband's collection, but some of these books had disappeared. In 1920, a meeting was conducted at which Dr. Howard Clarke presented a motion that a modern library should be established.

Every "city member" of the medical society was assessed $10 and every "country member" $5 toward the library. Trustees of the public library proposed that a reference library be operated within the Public Library building, and the Legislature passed a bill appropriating $1,000 for the Hawaii Medical Library. Dr. Paul Withington, chairman, was authorized to purchase books and periodicals.

So in the summer of 1922 the library moved to its third location, the Public Library. Less than a year later the librarian started complaining about the lack of space. Therefore, the decision was made to move "active" books and periodicals back to the hospital. Dr. Van Poole was informed by Bruce Cartwright in 1924 that the room in the Public Library had been promised to the Historical Society and that unless all the books were moved soon, "they would all be thrown out."

Dr. A.L. Davis reported in 1925 that the library contained 372 books as well as a "considerable number of complete sets of periodicals." Expenses for that year totaled $131.65.

From 1927 to 1932, Dr. Y.C. Yang was chairman of the Library Committee; $250 was appropriated for the library by the Hawaii Medical Association in 1929. The committee looked into various problems caused by the lack of organization, explored the possibility of employing a librarian and even turning the collection over to the Public Library or to Queen's Hospital. Some periodicals lacked continuity and valuable books had disappeared — all these problems in addition to the ever-present lack of space and money!

Accepted for publication February 1988

*Margery (Mrs. Clark J.) Hastert is The Queen's Medical Center historian, has been a member of the Board of Governors of the Hawaii Medical Library since 1983 and is in charge of the Medical History Room exhibits at QMC, where a recent exhibit honored Charles S. Judd Jr., MD.
Honolulu, Hawaii

After much planning the library moved again — this time to the third floor of the Liholiho wing of the Queen's Hospital. At the opening on March 2, 1934, 40 members were present with Dr. Arthur Duryea as chairman. An annual budget of $1,500 was proposed; gifts of books and journals came from individuals. Twenty-one journals were subscribed to and 112 new books were purchased. Miss Watson became the first librarian, working four hours a day. During the year, activities included monthly journal review meetings, a house-warming party, a turkey raffle and a lecture on "Medical Magic" by Dr. S.G. Gant.

However, the problem of adequate space continued to plague the library — due partly to the fact that it had joined the national Medical Library Association in 1936 and other medical libraries now contributed to the journal files. Finally, the idea of building a library on the Queen's Hospital grounds was approved by the hospital authorities. The Society was promised space in the future Mabel Smyth building, and a generous memorial gift was offered by Mrs. Charles Adams.

Alas, it was not that simple! Before the building became available, the hospital needed the space on Liholiho III, and once again the library was forced to move to temporary quarters — on the ground floor of Queen's main building. This space was limited, so it was decided that books could be loaned out — with a $5 deposit and a fine of $1 a day for overdue books. At this time, Dr. Frank Pleadwell added valuable books from his collection. Mrs. Byron Nelson was the librarian briefly; on her departure from the island, Mr. Bothwell replaced her.

At long last, in December 1940, the library moved into its new quarters in the handsome Mabel Smyth building. Mrs. Charles Adams had donated $20,000 in memory of her husband; her daughter, Mrs. Walter Dillingham, presented an additional $5,000 to furnish the rooms. Mrs. Dillingham also donated a *Vesalius Anatomy* in a glass case with a memorial plate affixed to it. (This volume was later stolen.)

The collection finally had a permanent home — or so it was thought! With the help of the Honolulu County Medical Society, it was catalogued in the fall of 1942. The Boston Medical Library system was used. A valuable donation was received in 1943 when the Kalihi Leprosy Investigation Station, which was about to close, gave a large portion of its journal files and textbooks as a loan for an indefinite time. This was a most welcome addition to the collection.

During World War II, military medical personnnel were given full library privileges. The Library Committee complained that its annual budget of $1,500 was too small and asked for twice that amount. It was decided to ask the Queen's Hospital and the Nurses' Association for annual contributions.

It was in 1944 that a group of interested physicians, including Drs. N. Benyas, F.J. Halford, Rogers Hill, Henry Gotshalk and Paul Withington, along with Mrs. Elizabeth Bolles, decided to establish an endowment fund to secure the uninterrupted growth of the library. Physicians supported this project by contributing $50,000 in the first two years; an additional $5,000 came from the Nurses' Association. Local businesses and health organiza-



The "Bungalow" on Iolani Palace grounds. *Archive of Hawaii photo*

tions increased the fund to about $90,000 by 1956.

The library was incorporated in 1945 as a tax-exempt institution, and a Board of Governors was elected to manage its affairs. All members of the Honolulu County Medical Society became members by payment of a stated portion of their dues, as did members of the Nurses' Association. Qualified professionals could obtain guest memberships for a small fee. From 1945, when its collection contained 6,000 volumes, the library grew to over 20,000 publications in 1956. Its new home was something to be proud of. The Charles R. Adams Medical Library was on the second floor of the new building. Adjoining it was a physicians' board room and the offices of Territorial Medical Association and the Honolulu County Medical Society. Cork floors were installed to provide a "quiet tread." The walls were of beautiful Philippine "Luan" hardwood and its double doors were carved in a design of torch ginger. C.W. Dickey was the architect.

However, the handsome new library was still not in a permanent home because by 1959, it was "bursting at the seams." One-third of the collection was housed at Leahi Hospital, and Martha Jurgens, library administrator, had serious storage problems.

A new library building was definitely needed according to Dr. Grover Batten, president of the board. Since the library was used by different groups and organizations in the community, it was felt that a fund drive should be organized. Dr. John Lowrey was appointed chairman. Dr. Harry Arnold Jr., editor of the HAWAII MEDICAL JOURNAL, stressed the importance of a medical library to the community and urged the public as well as physicians to support the project. By late 1959, nearly $120,000 had been collected, just $30,000 short of the project's goal.

The Queen's Hospital had offered matching funds up to $150,000 and had set aside a portion of its property mauka of the Mabel Smyth building. This would be leased to the library for $1 per year for 99 years. An appropriation of $175,000 was provided by the First State Legislature. Dr. Charlie S. Judd Jr. was elected to the Board in 1960.

Finally, on July 31, 1961, ground was broken for the library building in a ceremony that included Drs. Grover Batten, Frederick Giles, Henry Gotshalk, A.S. Hartwell and Richard K.C. Lee; Virginia Jones of the Nurses' Association; architect Vladimir Ossipoff; and A.L.Y. Ward of the Queen's Hospital Board. Batten pointed out that the library was intended to serve the community in general, the University of Hawaii, the East-West Center and the State Department of Health, in addition to physicians and nurses.

The handsome new building was completed in 1963. Two years later a sculpture piece, "The Flame of Prometheus," by Edward Brownlee was placed at the entrance, and trees and landscaping were added.

Batten, who had been on the Board since 1956, was elected president in 1958 and served in that capacity until his retirement in 1976. In his 1966 annual report, he stressed that year as one of great changes and tremendous growth for the library. Mrs. John Martinsen, who had many years of experience in medical libraries, had been head librarian from 1964 to 1967, when she

(Continued on page 216 — History)

The Architect Reflects on the Hawaii Medical Library

Vladimir Ossipoff, AIA*

My first contact with the Hawaii Medical Library was at a time when the library was housed on the second floor of the Mabel Smyth Building in very inadequate and crowded quarters. I was asked to see how the facilities might be improved, but attempts to relieve the conditions were only minimally successful. Through the subsequent untiring and persistent efforts of Dr. Grover Batten, then president of the Board of Governors of the Hawaii Medical Library, the plans for a new library building began to materialize.

Fortunate is the architect who has a client farsighted enough to provide a professionally prepared building program. Such was the case when my firm was commissioned to design the library building. In October 1959, library building consultants were engaged to include furnishing a Statement of Program outlining their recommendations regarding size and relative arrangement of the various departments, a review of the preliminary plans and a review of the final plans. The consultants, John Eastlake and Isabelle Andersen, prepared an exhaustive questionnaire and the replies were analyzed and resulted in a 99-page program in December of that year. An interesting clause in the consultants' services was that no sketches were to be prepared by them, leaving the interpretation of the consultants' report up to the architect. Indicative of how thoroughly the program was prepared, the Eastlake-Andersen report was further reviewed by consultants William H. Jessee and David Z. Bean.

The library was to contain 20,000 books, 30,000 volumes of bound periodicals plus another 30,000 periodicals not bound, with books over 10 years old to be housed in the basement.

It was with these documents and the detailed involvement of Batten that the design of the library building began to evolve.

The building in essence is formed by exposed concrete columns, a modified cruciform in section, the "ribs" of the columns flaring at the top into exposed capitals. The 24-foot equidistant spacing of the columns in both directions forms a module that is constant throughout the building. The in-fill of the exterior bays is of pinkish split concrete blocks laid in an epoxy instead of the usual mortar in order to present a more monolithic appearance by minimizing the joints of the concrete block units.



Early in the conceptual design, a sculpture at the entrance was envisioned. Fortunately, the concept was accepted as was sculptor Edward Brownlee's abstract "Prometheus," offering the Olympic "fire" to man (in this case the "fire" symbolizes "knowledge").

Unfortunately from the standpoint of aesthetics — but required by the building code, which steadily grows more restrictive — it was found necessary to add handrails at the entrance steps and, later, a ramp for use by those in wheelchairs.

The selection and arrangement of the bookcases and furniture were made with the architect's input.

The building has an area of 10,830 square feet on the main floor, 8,750 square feet on the mezzanine and 8,400 square feet in the basement. The contract for construction, which left the mezzanine as an unfinished space, was awarded to K&M Sakamoto for $343,850 in June 1965. The mezzanine was completed in April 1973 for $46,050. Including change orders during construction, the total cost of the building exclusive of furniture amounted to approximately $393,000. It would be safe to say that today the cost of building the library would have increased by tenfold!

Accepted for publication February 1988

*Val Ossipoff, dean of Hawaii's architects and founder of the Honolulu firm Ossipoff, Snyder & Rowland, was recently awarded the Hawaii Architectural Arts Award sponsored by the State Foundation for Culture and the Arts. Ossipoff was born in Russia, raised in Japan and educated in California. He has been practicing architecture in Hawaii for more than 50 years. When asked what it took to be an architect, he said: "An architect has to be a bit of a sociologist, lawyer and psychologist. He has to know human nature."

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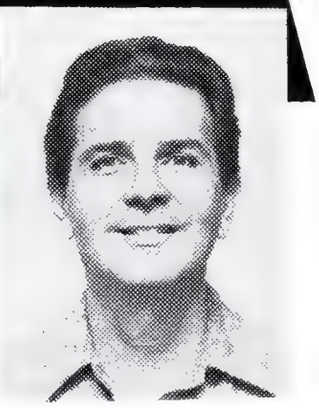
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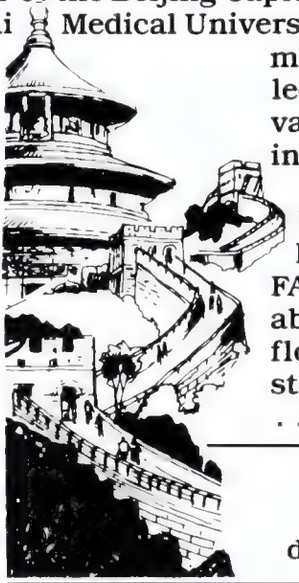


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10/8	At sea		
10/9	Pusan, South Korea	8 a.m.	6 p.m.
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10/11	At sea		
10/12	Shanghai, China	7 a.m.	
10/13	Shanghai		7 p.m.
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Hawaii Medical Library: The Pacific Connection

John A. Breinich

The Hawaii Medical Library is the largest health information resource in the Pacific. The National Library of Medicine in Bethesda, MD., has designated HML as the "Resource Library for Hawaii" in the Nation's Biomedical Information Network. This responsibility means that HML participates in regional activities of the Pacific Southwest Regional Medical Library Service (PSRMLS) based at the University of California-Los Angeles, Louise Darling Biomedical Library, which serves the four states of California, Arizona, Nevada and Hawaii. This group of 11 Resource Libraries in the region, including HML, plans services and policies to assure access to information by the region's health professionals and maintains the links to form a national network of library cooperation.

About the author . . .

John Breinich received his bachelor's degree in psychology from the Unversity of Iowa and his master's in library sciences at the University of Illinois. He has served as director of the Hawaii Medical Library since 1975 and is a member of the Medical Library Association, the Association of Academic Health Science Library Directors and Beta Phi Mu Fraternity. He was recently appointed honorary consultant to the Shenzhen Sun Yat-sen Cardiovascular Surgery Hospital in Shenzhen City.

—Norman Goldstein, MD
Special Issue Editor

While HML's major services and links are to health professionals in Hawaii and the Mainland U.S., our unique location in the middle of the Pacific and our cultural links to the rest of the Pacific Basin have expanded our services to very distant locations.

Micronesia

In 1979 the library was asked to assist the University of Hawaii School of Medicine with the Health Manpower Training Program based in Ponape, Micronesia. There was a need to establish a workable medical library collection there for the use of students in the training program as well as for faculty and hospital staff. Through many discussions with program director Dr. John Steele, the needs of the library were established and a plan was developed for selecting, organizing and shipping a collection to Ponape. Books and journals were selected and ordered by HML.

When materials were received, they were fully catalogued and processed ready for the shelf and held in Honolulu for later shipment to Ponape. After the majority of the books was received, the shipment was prepared and sent to Ponape. The director of HML went to Ponape when the shipment was received and unpacked the cartons to set up the library. During the visit, the hospital staff was instructed on the use of the library, and one person was designated and trained to maintain the library and be the contact person with HML concerning other information needs. Throughout this project, new books and journals were sent to Ponape, and HML also provided reference services, Medline searches, and interlibrary loans to supplement the small collection in Ponape.

During the Ponape visit, the HML director also visited the medical facilities of Truk, Saipan and Guam to report on the medical library needs throughout the region. HML continues to provide interlibrary loans and reference assistance, including Medline searches to those areas as requested.

The Health Manpower Training Program ended in 1983 and the Trust Territory of Micronesia reorganized into new political entities. The health-care needs of the area are still acute and a new program was established by the federal government and contracted out to the University of Hawaii School of Medicine.

In December 1986, HML signed a contract with the University of Hawaii to assist with library services to the Pacific Basin Medical Officer Training Program based in Pohnpei (the new name), with Dr. Gregory Dever as director. HML will update the collection for this new program and provide backup assistance in Honolulu of reference, Medline and interlibrary loan services. This project has already begun and will continue for several years.

Interlibrary Loan Services

Because of HML's relatively close proximity to other institutions in the Pacific, many medical libraries depend upon the collection at HML to provide information not available in their area. HML regularly provides interlibrary loan and photocopy services to medical libraries around the Pacific Basin, including Micronesia, Fiji, Samoa, Okinawa, Guam and other remote areas. In some cases, HML will refer the request to the Mainland if the journal is not available in its collection.

The China Connection

In 1983 the HML director was invitied by the Minister of Public Health of the People's Republic of China to visit medical libraries in academic medical centers, hospitals and societies in Beijing, Shanghai, Guangzhou and other cities. Since that visit, more formal arrangements have been made between HML and medical libraries in China, and a series of activities have taken place.

The director was invited to present a series of lectures on medical library management in 1985, 1986 and 1987. Medical librarians from all parts of China attended the lectures that were given in Shanghai Medical University (formerly Shanghai First Medical College), Hunan Medical College, West China University of Medical Sciences in Chengdu, Sun Yat-sen University of Medical Services in Guangzhou, Xiangtan University and Zhejiang Medical University of Hangzhou. To date, more than 2,000 people have attended the lectures and participated in the discussions on medical library management.

In 1985 the director was named the honorary director of Capital Institute of Medicine Library in Beijing and a visiting professor of Library Science at Shanghai Medical University.

Accepted for publication February 1988

The relationship between these libraries and others in China and the Hawaii Medical Library has strengthened over the years because of continued contact, the cultural bridge that Hawaii has built between the U.S. mainland and China, and our geographic position.

Over the years, the HML has also assisted in rebuilding the collections of several medical libraries in China that were severely disaffected during the Cultural Revolution. Thousands of volumes of medical books and journals have been shipped to medical libraries in China with the help of several Hawaii donors who contributed money to cover shipping costs. We are continuing to send materials to China as funds permit.

In 1986 the Hawaii Medical Library established the China Medical Librarian Training Program. There is a tremendous need in China for trained librarians, and several institutions asked us for help in accepting some members of their staffs for training. With the generous support of some local individuals and foundations who contributed funds toward the living stipend and a tuition waiver, which was provided by the University of Hawaii School of Library and Information Science, we accepted the first two trainees.

Jian-ping Liu from the Capital Institute of Medicine in Beijing was accepted for an 18-month study and training program in which she earned a master's degree in library science and received practical training at HML. The second trainee was Zhang Chungen from the Shanghai Medical University Library. She was here for nine months to take some courses and receive training at the HML. In August last year, the HML accepted Luo Gonga, a trainee from Sun Yat-sen University of Medical Sciences in Guangzhou; she was here for six months. In December, Jia Ying, another trainee from Shanghai Medical University Library, was accepted for a 12-month period.

The program is designed to provide training in medical library operation as a supplement to the lectures that are given each year in China. When the trainees return to their library, they share their experiences with other members of the library staff and assist with the improvement of systems and services to modernize their library. They also act as a liaison with the HML as it continues to cooperate with their library to improve collections and provide annual lectures on management. The Hawaii Medical Library is proud to be part of this exciting and worthwhile project to assist medical libraries in China as they develop new skills and services.

The Future

Because of Hawaii's geographical and cultural links with China and the rest of the Pacific, the Hawaii Medical Library feels a responsibility to assist other medical libraries in whatever way possible. With the continued support of donors, the library will continue its training activities and the shipping of duplicate books and journals to libraries around the Pacific that need them. In our 75th year of service in 1988, we look forward to many more years of continued involvement with Pacific activities.

HISTORY *(Continued from page 211)*

moved to the Mainland.

The collection continued to grow in the early 1970s. In 1973, the University of Hawaii expanded the School of Medicine into a four-year program, and a contract with the Hawaii Medical Library was established to serve the new school. This event marked a dramatic change in the library involving extensive enlargement of the collection, addition of staff and services, and an increase in hours of operation. The Board of Governors was expanded to include four people appointed by the dean of the School of Medicine, and the University contract provided for the sharing of operating expenses of the library. Also in 1973 Medline services were established to provide on-line computer access to information at the National Library of Medicine. The library became a part of a network of medical libraries in Hawaii and across the Mainland with computerized access to regional libraries and the National Library of Medicine, part of the National Institute of Health. It was designated as the Resource Library for Hawaii in this network. James Parrish and Walter Walker were head librarians during the early 1970s.

In 1974 space had again become a problem. The mezzanine floor of the library was completed, and the library occupied in early 1975. This provided a large area for future collection growth as well as additional space for readers.

John A. Breinich was appointed director of the medical library in late 1975. During the late 1970s, emphasis was placed on collection development and organization to improve services. A serious problem for some years was the disappearance of many books and journals from the collection, including some rare books. A book security system was installed in 1977. The library also began expansion of services into computerized systems by joining OCLC, a national bibliographic network to share cataloging information.

The main problem over the years has been financial. Support comes from the University Medical School (36%), physician dues (16%), hospitals and membership fees (17% each), and miscellaneous sources (14%). The State Legislatures have appropriated nothing since 1959. And now in 1988, with Hawaii Medical Library's 75th anniversary coming up, the budgetary requirement rears its ugly head once more! However, with a fine Board of Governors and a director such as John A. Breinich, who has given so generously of his time and himself to the cause, plus a dedicated staff, the library will surely rise above all these problems and continue to serve the people of Hawaii for many more successful years.

In July 1987, the medical community — in fact, all of Hawaii — was shocked by the untimely death of Dr. Charles Judd Jr. Judd had been a board member and officer of the library for over 25 years. His collection has been donated to the library, and the library's History of Medicine Collection has been dedicated in his memory:

Charles S. Judd Jr.
1920-1987
For his love of medical history,
his contributions to the Library,
and his compassion for others.

Dr. Frank McDowell, in the Nov. 2, 1970, edition of the Honolulu Advertiser, said "the level of health services of research in a community can never rise higher than the level of the best medical library in the community." May the Hawaii Medical Library continue to keep this level high!

ACKNOWLEDGMENT

The main source of information for this article came from *History of the Medical Library* by W.H. Civin, MD.

Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

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Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage®* Vials: 300 mg./2 ml. in single-dose ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

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BRS-TG:L73B Date of issuance Apr. 1987

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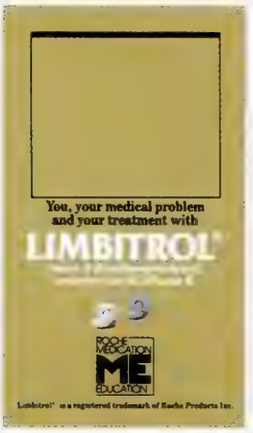
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PLANDEX 35201

'Tole Mour' — The Marimed Foundation Ship and the Queen's Health Care Center in Memory of Charles S. Judd Jr., MD

Robert Grossman, PhD*

The Marimed Foundation (the name comes from "Maritime" and "Medicine") is a nonprofit, private, voluntary organization established in 1984 and governed by an international Board of Trustees.

Marimed's mission is to provide culturally appropriate and cost-effective training programs and services to the governments and peoples of Micronesia. Its current focus is on providing health-related training and health-care services in the Republic of the Marshall Islands.

It currently has four program areas:

1—Medical and Child Health Programs. Includes immunization, growth monitoring and prenatal care programs, family planning services, the training of traditional birth attendants and community health workers, and community education on nutrition and sanitation.

2—Dental Services. Emphasizes prevention programs at the community level.

3—Adult Disease Treatment and Prevention Programs. Includes eye care, diabetes, hypertension, sexually transmitted diseases and cancer-screening programs.

4—Cultural Support Programs. Emphasizes suicide prevention and vocational training programs.

Marimed's philosophy of development is summarized by the following ancient Chinese poem:

Go to the people, live among them, learn from them, love them,
start with what they know, build on what they have:
but of the best leaders, when their task is accomplished,
their work is done, the people all remark,
"we have done it ourselves."



Queen Emma Foundation president Fred Pritchard (right) presents a $400,000 check to Dr. Lonny Higgins (left) of the Marimed Foundation in memory of Dr. Charles S. Judd Jr., while his widow, Mary, looks on.

The Ship

Because nearly half the population of the Marshall Islands lives on isolated outer islands, the government of the Marshall Islands faces enormous problems of logistics in providing health care to its people. To address these problems, the Marshall Islands government decided to commission a specially designed ship to support the existing dispensaries and to provide both training and medical care in the outer islands. The government selected Marimed to help it implement this plan.

Drawing on three years of field experience in Micronesia, and working with an international team of naval architects and consultants, Marimed has designed a small ship that will be efficient to operate and technologically appropriate to the region. To save on fuel costs, to attract teaching-oriented officers and engineers, and to provide training in the maritime skills, a sailing ship was chosen — one modeled after the sail-training ships operated by many maritime nations. The ship is now nearing completion in Seattle, Wash. It has been named *Tole Mour* ("gift of life and health") by the school children of the Marshall Islands.

Tole Mour will be homeported in Honolulu where it will return annually for drydocking and inspection by the U.S. Coast Guard. The selection and layout of its medical facilities have been largely determined by a team of experts loaned to the project by The Queen's Medical Center and the office of the Naval Medical Command, Pacific Region, at Barbers Point.

Tole Mour is a modern steel ship with complete electronic navigation and communications equipment and a largely auxiliary engine. But, because it will use sail propulsion at trade-wind latitudes, it will burn about $125 per day in fuel — mostly for power generation — compared with $2,800 per day for the motor ships that are now used in Micronesia to resupply the outer islands.

The projected annual operating cost of *Tole Mour* is $350,000, a fraction of the cost of operating the existing motor ships and an amount the Marshall Islands government can afford. This figure includes salaries for crew and for a full-time

Accepted for publication February 1988

*Executive Director of the Marimed Foundation
1050 Ala Moana Blvd., Bldg. D
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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.



References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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physician program supervisor. It also provides for ship-board training of Marshallese young men in seamanship, navigation and marine engineering. Such training is intended to prepare Marshallese for permanent positions as *Tole Mour's* officers and engineers, and also as officers, engineers and deckhands for Marshallese merchant and fishing vessels.

The Marshall Islands government has contracted with Marimed to pay *Tole Mour's* annual operating and maintenance costs and will provide half the ship's medical staff. Marimed has pledged to raise the $2.4 million needed for construction and equipping of the ship and will provide the rest of the medical staff, drawing from an international pool of volunteers.

Health Status of the Marshall Islands

The Marshallese people contend with serious health problems, including severe malnutrition, high infant mortality associated with dysentery and diarrhea, diabetes, tuberculosis, sexually transmitted diseases, hypertension, alcoholism, parasitic diseases, and a suicide rate of adolescent males that may be the highest in the world.

They are also faced with a population that has tripled since 1945 and is expected to double again in less than 15 years. Since almost half the population lives on remote islands without electricity or running water, problems of logistics, inadequate community health-worker training, and poor radio and dispensary equipment maintenance have hampered efforts to provide a reasonable level of health care to the people, despite the best efforts of the local government.

Hawaii's Ties to the Marshall Islands

Hawaii's ties to the Marshall Islands date from November 1857, when the first *Morning Star* missionary ship called at Ebon atoll carrying the Rev. Hiram Bingham and a Hawaiian teacher, Kanoa. Three years later, the Hawaiian Missionary Society sent Hezekiah Aea to Ebon, and there followed a period of uninterrupted mission service in the Marshall Islands by Hawaiian clergy. In contrast to the Caroline Islands, which were primarily served by missionaries from New England, the success of the mission schools in the Marshall Islands has been attributed largely to the work of Hawaiian missionaries.

From 1857 until the 1960s, a series of seven *Morning Star* ships, homeported in Honolulu, provided logistical support to the Hawaiian mission schools in the Marshall Islands. These ships were largely paid for by the school children of Boston and Hawaii through the purchase of 10-cent and 55-cent stock subscriptions. As a young man, U.S. Congressman Daniel Akaka served as first mate and engineer on *Morning Star VI.*

In the areas of health and education, Hawaii has made important contributions to the people of the Marshall Islands. Hawaii's hospitals are the principal referral centers for Marshallese requiring tertiary care; the University of Hawaii's Schools of Medicine, Public Health, and Nursing continue to provide training and other support services to health professionals from the Marshalls; and many of the current generation of Marshallese government leaders were educated in Hawaii schools and colleges.

Fred Pritchard, president of the Queen Emma Foundation, a nonprofit organization and part of the Queen's Health Systems, recently granted $400,000 to the Marimed Foundation. The grant, honoring Dr. Charles S. Judd Jr., will be applied toward the cost of completing the shipboard medical facilities on the *Tole Mour.*

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MRI CASE OF THE MONTH

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Clinical Information: A 36-year-old male with total blindness in the left eye.

Image #1



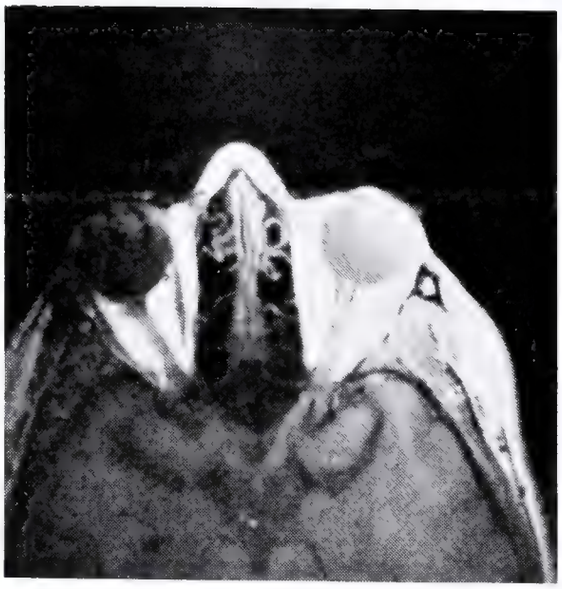
Image #2



Image #3



Image #4



Radiologic Diagnosis: Images #1 and #2 demonstrate a "mass" within the posterior chamber of the left globe. The signal intensity of the fluid within the globe is increased as compared to the normal (Images 3 & 4). MRI is well suited for evaluating retinal detachment and detecting underlying tumor.

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Memorial Service for Dr. Charles Sheldon Judd Jr.*

Chester Terpstra, DD**

We are gathered this evening, at the kind invitation of the family, to pay our respects to and to celebrate the memory of Dr. Charles Sheldon Judd Jr., who was born on December 29, 1920, here in Honolulu, and who passed away on July 23, 1987, in this city. He was 66 years old.

He is survived by his wife, Mary; by two sons, Charles Sheldon III and Thomas; by a daughter, Bonnie; and by a nephew and a niece.

Charlie was the second of two children born into the home of Charles Sheldon and Louise Judd. He attended Punahou School, the University of Hawaii, and graduated from Yale. He then matriculated at the School of Medicine at Yale and later took postgraduate work in pathology at Vanderbilt.

Through mutual friends, Bob and Karen White, Charlie met a young woman anthropologist from the Bishop Museum. After courtship, interspersed with a period of separation to test if they were really meant for each other, Mary Julia Stacey and Charles Sheldon Judd Jr. were married on February 18, 1956. I would suspect that the jury is no longer out — this lovely, devoted couple were meant for each other.

The media has extensively covered Dr. Judd's long and distinguished service in the field of medicine at The Queen's Medical Center, on Molokai, in Western Samoa, with Kokua Kalihi Valley, and with the John A. Burns Medical School.

Charlie Judd was a beautiful human being. We might today use the words of David when he heard of Saul's death, "How have the mighty fallen!"

Charlie's love of every day of his own life, of his family, of his work, of his fellow human beings, and of all God's creation radiated from his being.

Among those in this Pacific Basin who mourn his death are the underprivileged who lacked medical insurance, the fledgling medical students, the people of Kalaupapa and topside Molokai and the citizens of Western and American Samoa — all people who needed a true friend in high places.

Joining them today are doctors and nurses throughout this state, those devoted to the study of Hawaiiana, archaeologists, anthropologists, naturalists and all lovers of the great out-of-doors.

All of us in this hour join with Charlie's immediate family and with members of the larger Judd, Pratt and other kamaaina families to celebrate the life of Dr. Charles Sheldon Judd Jr.

Many of us knew Charlie in varied ways. We met him not only in the hallways of The Queen's Medical Center and here at church, but on the tennis courts at Ala Moana, on the Bob Krauss, Twigg-Smith, Judd hiking expedition at Opihikao on the Big Island and outside Aggie's Hotel in Apia, Western Samoa.

This evening, in your memory you are recalling where your and Charlie's paths crossed: Was it at the Kokua Valley Clinic? Planning for the reunion of Boy Scout Troop No. 8? At the Hawaiian Mission Children's Society gathering? At the Judd home up on Tantalus, or at their country home on the Windward side? Some of you were his patients at the hospital; others were students at the medical school. Some went on nature walks, or a historical, scientific expedition with him.

Several people, when hearing of Charlie's serious illness and then, later, of his death, have asked the question, "Why?"

That question brings to my mind what a theologian friend who just six hours before his death at the age of 54, gave an audience to the press. They asked the same question, "Why?" My friend answered, "I don't ask the question, 'why.' " He went on to say, "for us, it is unanswerable. But whether we live or die, it is unto the Lord. That is the important thing about life as a Christian."

That, too, was Charlie's philosophy of life. Just a few weeks before his hospitalization we were starting a new Learning Tree semester here at Central Union. One of the courses we were offering in that Adult Education program was: "How Does One Live Out One's Faith in the Market Place from Monday through Friday?" We wanted a doctor, an attorney, a businessman and the like — all lay people — to participate in this very practical sharing time. You have guessed it — we asked Charlie, a member of this church for 52 years, to lead off this series.

I have also heard Charlie speak at one of our worship services. In hearing him quote from the mystics and share from the Psalms, the Prophets and the Gospels, you began to understand that here was a man whose roots were like those of the tree planted by the rivers of water. His was not a second-hand faith, an inherited religion.

Because Charlie's life was totally committed to his God, he had nothing to prove. He was accepted, reconciled to his God. He knew who he was, where he was going, and the purpose of his life. So he carried on his day-to-day task in his own quiet, gentle, humble, self-denying, compassionate, yet joyful way.

The New Testament hints of this mystery, of how God allows some of His children to enter into the suffering of our Lord. Not everyone, for sure, but undoubtedly those who have the depth of personal faith, the inner fortitude — those who can be trusted with suffering for the sake of humanity. Dr. Charles Sheldon Judd Jr. was one of those chosen ones.

Charlie, we commit you to the God your forebears trusted, and the same level of faith was exemplified in you. We're going to miss you, but we know you rest in peace.

Amen.

* Memorial Service at Central Union Church July 29, 1987

** Pastoral Staff, CUC, Honolulu, Hawaii

Eulogy on Charles S. Judd Jr., MD*

Thomas Whelan, MD**

This evening we are gathered to memorialize a unique and gentle person, a noble and beautiful human being, a man to whom his wife (who was also his office manager) often referred as "Mr. Write-off." This was for the many fees he "wrote off" for his less-fortunate patients — Charlie Judd.

Charlie saw good in all people, and his ratings of those whom he interviewed for residency were always four or five out of a possible five points. It is my belief that he never failed a student. His greatest compliments were reserved for those who had warmth and those who cared for his or her patients. I can still hear him saying, " 'Wheel,' that Joey (or Judy or Harry, or whoever it happened to be at the time) really is caring and sensitive. He (or she) has heart. He (or she) will be a fine doctor."

I am representing and speaking for thousands of medical students, residents and colleagues who came to feel the charm, sincerity and dedication to teaching of Dr. Judd. This ceremony is appropriate, as it brings together two of his families: Queen's and the John A. Burns School of Medicine with its residents and students, who were a part of Charlie's extended family. They all loved him, and he loved them.

At this time, I should like to relate a little of our 50 years of friendship that began at Yale undergraduate school and continued on through medical school at the same institution, then finally our last 15 years together here in Hawaii.

We became fast friends in medical school, as we had a small and very close class, 62 in number. At class parties, Charlie, Johnie Morton, Joe Morris and Tom Whelan — the hams of the class — could be counted on to perform. John would recite "Casey at the Bat"; Joe conducted a mock dissection contest between two of the noted anatomists of the day, Sobotta and Spalteholz. I would sing the only song I knew, and Charlie would sing and dance the Hawaiian war chant with such ferocious antics that Norma, my fiance, would watch in awe and wonder how such a sweet person could be from a place as savage as Hawaii.

Charlie enjoyed very much telling the following story about me. It should be prefaced, however, by my saying that Norma and I were to be married on Feb. 19, 1944. We had invited the whole class to the wedding. Eight accepted, with Charlie among them, and this is how he would describe the events:

"On Feb. 18, 1944, we eight arrived in Boston in our PFC uniforms (we were all in uniform in medical school in the Army specialized training program). At the time, there were a million men under arms ready to deploy from East Coast ports for England and then for the Normandy invasion on June 6, 1944. It seemed as if most of them were in Boston, and all places of lodging were filled. Upon inquiring from the USO where we could stay, we were told the only place available was the Milk Street Jail; it was warm there, and there were cots. We could even get a meal. We went and were accommodated. All was well except that it was rather disconcerting when after the eight of us entered our cells, the doors were slammed shut behind us, and keys were turned in the locks."

And that my friends, is how Charlie, with a twinkle in his eye, liked to depict the eve of the Whelan wedding.

Charlie was most selective in choosing a wife. As a matter of fact, he was the last man in our class to marry, but what a marvelous choice he made. Mary Stacey has been the perfect helpmate, and their life together has proven that.

We didn't meet Mary until Charlie and I were attending the Harvey Tercentenary Congress in London. At that time, Charlie lived in Honolulu and was with the Honolulu Medical Group. I was stationed at the 2nd Field Army Hospital in Munich, Germany. Unbeknownst to the other, we both arrived at the same meeting and were astonished and delighted to meet at tea time during one of the breaks. In the meantime, my wife was on a ladies' tour, sponsored by the conference. On the bus, which was on its way to a visit to the Queen's mews, an attractive lady was seated beside her. Norma, sensing her to be American, engaged her in conversation. The young lady stated that she was from Honolulu.

"Oh," said my wife, "we have a very close friend in Honolulu. Maybe you know him. His name is Dr. Judd."

"Of course," she responded with a bright smile, "He's my husband."

So it was in this unusual way that we first met Mary Judd. That evening we went out together and influenced them to change their itinerary to take in lovely Munich. They did, and we had a joyous reunion at our home.

So many memories!

The most recent ones are of Charlie's and my infamous annual golf matches at the Hawaiian Surgical travel meetings. Because we rarely could finish before evening, Norma gave Charlie a dozen golf balls that would become illuminated in the dark. Then we could finish our games in the moonlight.

There was also the famous match at our 40th medical school reunion at the Yale Golf course, which has so many water holes we lost 24 balls before we were half through. We had to go back to the clubhouse to get more.

It was always a race to see who would get the booby prize — until Charlie "snuck" out and took golf lessons. You could hear my cries of "foul" clear from here to Kauai.

These are just a few of the memories I shall always keep, but it is a pleasure to share them with you.

Charlie is now at rest. We will all miss him immeasurably. Remember, however, that we did have the privilege of knowing him. People we have loved and who have loved us not only make us more human, but they become a part of us, and we carry them around all the time whether we see them or not.

Thank you, Charlie, for all you have given each one of us.

Goodbye, old pal.

* Presented at The Queen's Medical Center, Honolulu, Hawaii, July 30, 1987.

** Department of Surgery, John A. Burns School of Medicine.

A Tribute to Charles Judd Jr., MD from Samoa

Our beloved Charlie Judd spent three years in Western Samoa practicing medicine and surgery in a way so as to teach and train the healers of that outback community to care for their own people better.

Dr. Lancelot Eves was one of Charlie's favorite "students" and a great friend of both Charlie and Mary, his wife. When asked to contribute a piece to this special issue that commemorates both the 25th anniversary of the Hawaii Medical Library and the late Dr. Judd, who was closely associated with it for all of its 25 years, Lance responded with alacrity and with feeling.

Lance accompanied his "in memoriam" with the following brief note:

"Thank you for asking me to write a tribute to Charles Judd Jr.

"I must say, to begin with, that it is a great honor to be asked to do this and indeed a greater honor to write an account on this great physician. At times I was emotional as I thought of Charles whilst preparing this article.

"I am practicing privately running a general practice and I operate on my own patients. Charles gave me the knowledge, the skill and the confidence. I am hoping to enlarge my clinic so that I may be able to admit patients.

"There was a lot of fun, excitement and learning that had transpired during his period as a surgeon in Samoa. He was able to evoke from all the doctors here their knowledge and medical and practical experience that was latent and about to go deep into oblivion.

"At tennis he was my partner. Before a game, his usual advice was 'give'em hell' — many times it was the other way 'round. If we were beaten by a younger team he'd say to me: 'Youth is a wonderful thing.' You can see that I can go on and on.

"Mary was more than a wonderful and fitting partner to Charles. What a lady! She was full of love and behind her man every hour they were in this country. I said 'every hour' because many a time we did emergencies that finished about 6 a.m., and we started the day's list at 8:30 the same morning. She offered herself as teacher to Avele College and Papauta Girls' College.

"My wife and I hoped that Mary took the loss of this great man with courage.

"Tofa Soifua."

s/Lance Eves, MD

J.I. Frederick Reppun, MD
Editor



In Memoriam: Charles Judd Jr., MD

Lance Eves, MD*

"Love endures long and is kind. It bears everything in silence."
—1 Corinthians 13 verses 4 and 8

Charles Judd Jr., a deeply religious man, devoted himself entirely to his duties as a doctor of medicine. He was a man full of love, with kind respect and concern for others; a meticulous worker who left no stone unturned and left no room for error.

I first met him briefly in 1964 when he came to Samoa as a member of the World Health Organization, which sponsored a working tour of surgeons from various island nations of the Pacific. That trip made him see that Samoa had the need for improved medical services. Charles sacrificed his time and that of his young family, and perhaps wealth, in order to fulfill the call within himself to return to work in Samoa.

In 1966 he returned. I was his surgical registrar (resident). I worked with him for the entire three years he was here. It took no time to be friendly with Charles because of his humbleness and gentle but thorough and understanding approach to any problem — no matter how difficult or perplexing the situation was. In the operating room he was not only the surgeon but the tutor, the demonstrator and the moral supporter, as we progressed in and out of the abdomen, right to the last skin stitch. He was "the incentive" to the clinical staff of the Motootua Hospital.

The general standard of care and practice slowly emerged and surfaced, surged forward and was uplifted. Every doctor made it a point to attend the clinical discussions and case presentations. The combined medical/surgical grand rounds occupied the whole morning and early afternoon, twice a week. A lot of discussions and arguments and jokes transpired during those rounds.

Some long-remembered remarks and observations by some patients: On our way out of the ward we overheard a voice — "O IESU KERISO LE TAGATA LEA (THAT MAN IS JESUS CHRIST); he relieved my pains even before he examined me. If we have ten Charles Judds in this country, why worry? He can make a good president of the U.S. O le fa'aola (the healer.)"

His knowledge of the history of medicine was unsurpassed. The late Dr. Okesene Moananu was just one of our surgeons. Charles knew him as the first to use coconut husk fibers as suture material and the first to utilize coconut juice to supplement IV fluids while working in the remote Tokelau Atolls, in the early 1930s. He knew of Dr. Leiato Tupua, to transfuse ruptured ectopic intraperitoneal blood in a desperate situation in a remote island in the Samoa group. Occasionally that was the situation in here, for in those days there were no blood banks. If there was no blood from the patient's family, the alternative was to offer our own blood and do the operation.

On July 1968 a 12-year-old boy was brought to the hospital with a pseudo-aneurysm of the left femoral artery. Blood was desperately needed. Charles donated his own blood. That merciful and salvaging act touched the hearts of those present. They, too, volunteered. The operation was uneventful and the child was saved.

Charles was fascinated with the late Dr. Ailao Imo — A great asset to the local health services, though he died young and early. Charles and Ailao established and founded our medical library. There was a steady influx of medical information, journals and books. Death conferences and journal presentations and discussions were created. Charles left messages at local hotels to any doctor on holiday: "If interested, come to the hospital." As a result, a few specialists from the mainland U.S.A. found themselves spending a few hours operating in our hospital.

The need for specialized treatment was apparent in almost all areas, surgically speaking. Charles Judd was instrumental in organizing visits by the Shriners Hospital surgeons of Hawaii, orthopaedic teams from New Zealand, plastic surgery teams from Stanford, cardio-thoracic teams from New Zealand. To date, visits from Hawaii Shriners Hospital and Stanford are continuing to what is now called Australasia, for geographical reasons.

Charles Judd introduced us to various sports not only for our physical fitness and joy but for acquaintances. A hospital tennis team was competing in the national championships. There were weekly volleyball games at his home, followed by social drinks. An occasional strange-to-us grid iron (football) was played. He organized hikes, picnics, sails and camps. He physically told everybody the joy there was in this country through work, through sports and even leisure. He was friendly with everyone and a lot more wished to befriend this great man.

Charles Judd was a firm believer in continued learning. He did not talk much but his actions and willpower to action were enough of an evoking force for anyone to realize what ought to be done.

Every doctor who knew Charles or got the chance to work with him had to be cautious — I mean medically speaking. Anatomical questions could be asked any time during surgery. However, everyone had their share of benefits and privileges. He consolidated my interest in surgery and to know surgery is not only knowing how to incise but how to be able to picture in one's mind the advance of the healing processes within the incision and the ability to nurse the incision so that it heals by first intention. He imparted his knowledge and skill to his colleagues. Even qualities like punctuality. Once, when I was late, he'd scrubbed, gowned, and holding a scalpel, waited for me. I felt apologetic and asked myself who am I that he would wait?

Outside the hospital Charles Judd was active at the church. Once I was invited to hear him preach the sermon. I remembered that well because I treated that service as my own thanks-giving day, after doing my first gastrectomy. He was father to some American Peace Corp Volunteers who were at the verge of nervous breakdown, resulting from a sudden divorce from the general automation in the U.S. and left in a small island somewhere deep in the South Pacific, where coconut was the only drink apart from H_2O.

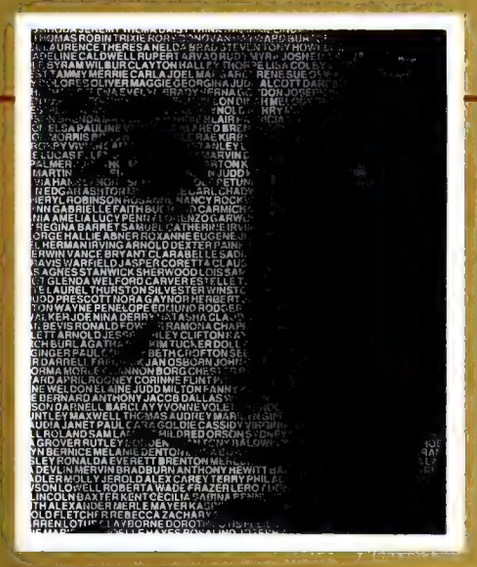
At the end of 1968, the Judd family left Samoa. Many people — friends and ex-patients — farewelled them and offered gifts. Many more invited them to dinners, picnics, as a token of deep appreciation. The then-prime minister hosted a cocktail party and many people were invited. Charles, in that event — in his address, started his speech by saying: "Mr. Prime Minister,

* P.O. Box 1319
Apia, W. Samoa

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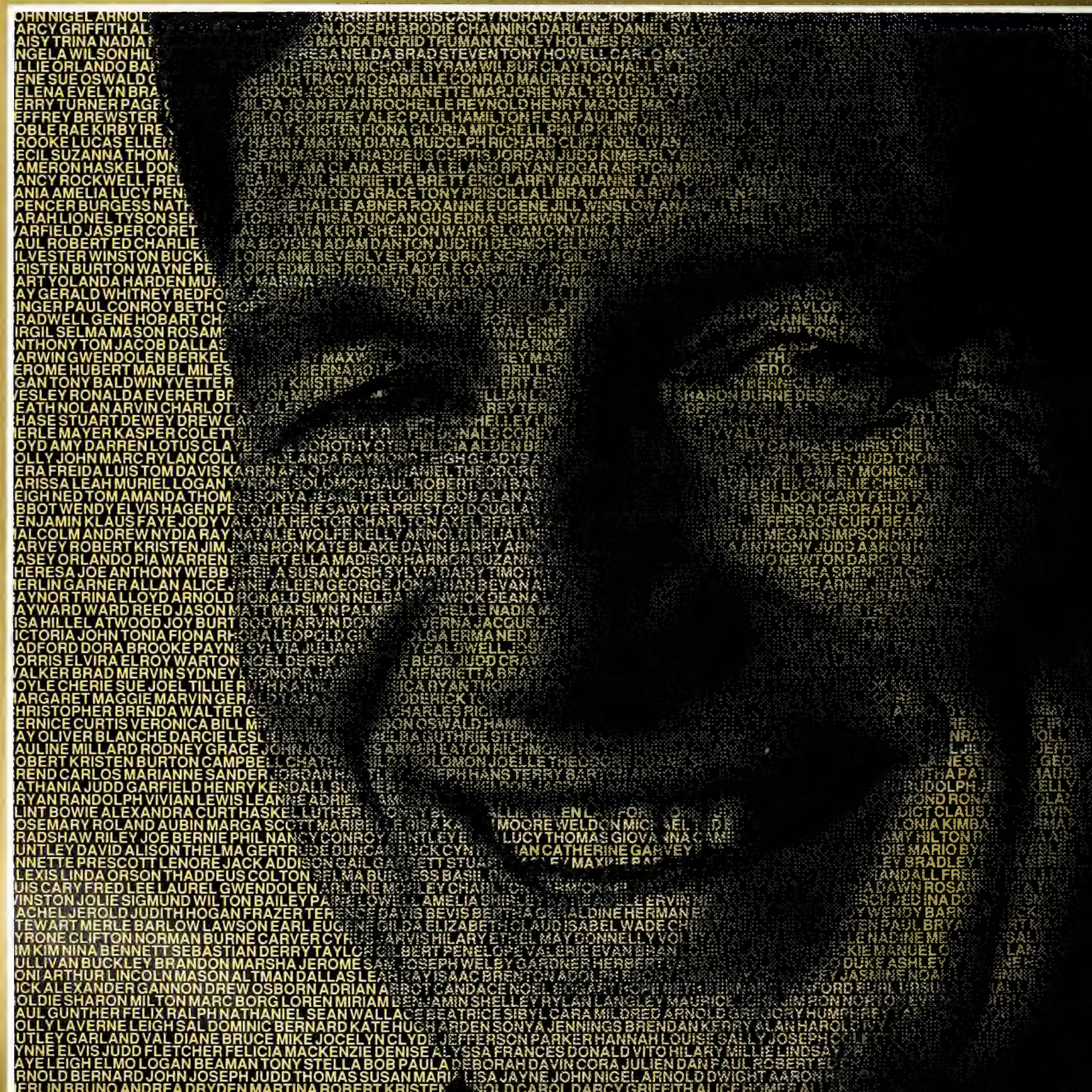
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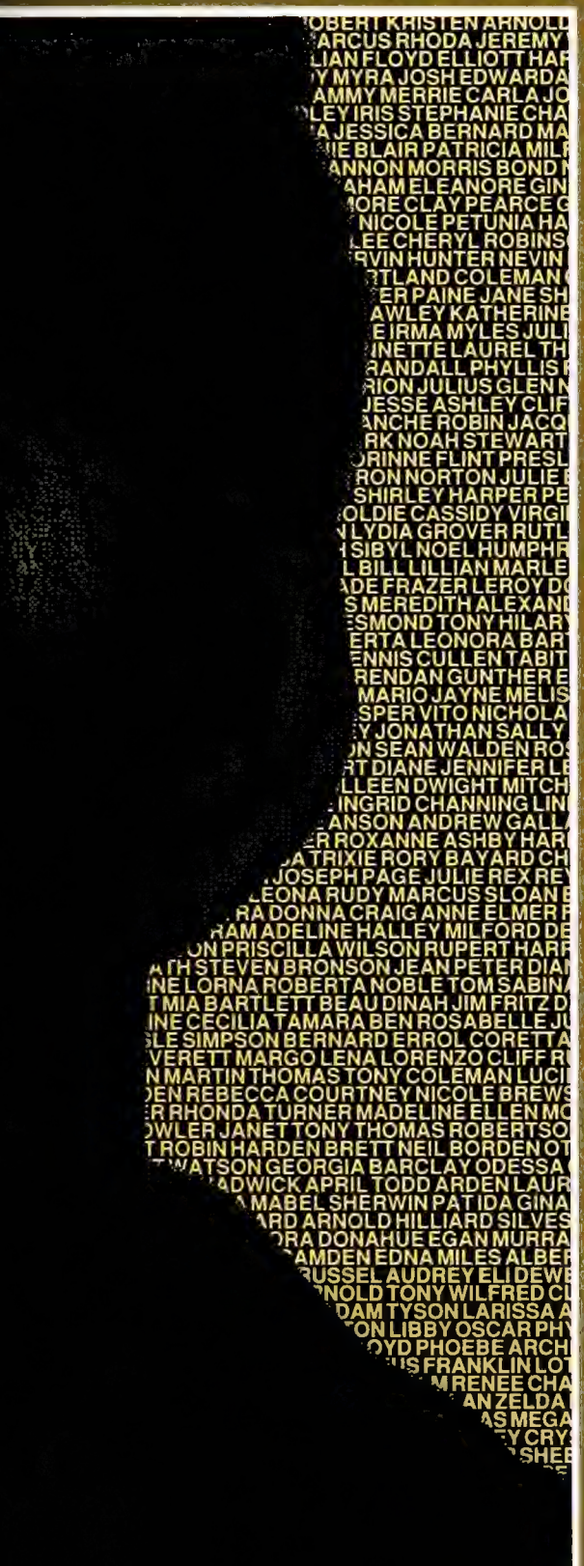
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...like the more than one million patients who have received INDERAL® LA.

In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY

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The one you know best keeps looking better

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The one you know best keeps looking better



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:
1. Data on file, Ayerst Laboratories.

D7295/188

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PHILADELPHIA, PA 19101

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ladies and gentlemen, patients."

In 1969 and 1981 I stayed with Charles and his family while attending the Pan-Pacific Surgical Conferences. He introduced me to many outstanding surgeons and I had a chance to hear many of them present papers.

During the three years he was here in Samoa, two doctors and I co-wrote with Charles Judd five medical articles that were published in the Fiji School of Medicine Journal.

Every Christmas since they left Samoa, Charles Judd sent a family Christmas card and a small note about them.

Many people in Samoa were saddened to hear of Charles Judd's death. We knew very late to organize attendants to his funeral.

I wish to join my wife, Feagai, my children Eti, Ropati, Shane, Wayne and Lupe, in farewell to you Dr. Judd — manuia le malaga, tofa soifua. To Mary Judd we all wish you happiness and best of health. To Bonnie, Charles, Thomas — the best of successes.

Kokua Kalihi Valley

Rev. A. Joris "Jory" Watland*

Early in the spring of 1972 a group of community residents and social service agency staff were meeting to nominate people for the board of directors of a new entity, a new dream, maybe even a new agency for genuine help. The as yet unincorporated entity was called Kokua Kalihi Valley (Comprehensive Family Services). Twenty-one names were offered by those present. The new Samoan Methodist pastor nominated Dr. Charles Judd Jr. No others knew him, but all accepted the nomination. So did he, and was elected as a member of the board.

KKV had a very simple goal statement: "To be an agent for health and reconciliation for the residents of Kalihi Valley." No one more appropriate than Charlie Judd could have been elected to teach us all how to be that agent. Soon after hiring and training a small staff, Charlie suggested that we should start offering medical care. We had no building, no medical staff, and no budget for medical services. None of this deterred Charlie. He said, "Just find a space. I can bring my stethoscope and otoscope/ophthalmoscope. We can borrow a scale from the public health nurses."

Soon everything fell into place — Sister Maureen of St. Francis donated an old exam table, the manager at Kam IV Housing arranged for space in the mothers' sewing room, Florence and George Mow made removable room dividers with thredded galvanized pipes and used, hemmed sheets, and Luis Navarro Sr. made a large wooden box with a hasp and padlock for the medications (donated samples from Charlie's office).

On Oct. 27, 1972, a new clinic was born. There was Dr. Judd and Dr. Bill Myers, a recently retired pediatrician from Straub, a nurse from the Red Cross, and a nurse who was a member of Kalihi Baptist Church. A new colorful sidewalk sign was made by the Alexopouloses. No patients showed up. I got nervous. Charlie wasn't concerned. He knew we had to be trusted first, then used. For the next six years Charlie came to Kalihi Valley every Wednesday afternoon.

By the summer of 1973 the clinic had moved into a 1945 military surplus personnel trailer (a photo taken on a Saturday workday preparing the trailer shows Charlie on his hands and knees painting on roof sealant). The word began to spread about Dr. Judd being at the clinic. Relatives of Samoans living in Kalihi were flying from Samoa to see the doctor — the same doctor they had learned to love in Western Samoa. Patients would start arriving by 12:30 to see the doctor after he had finished his morning surgeries — sometimes not until 3:30. There was never a complaint. Everyone knew that when their turn came, the doctor would treat them as if they were the only patients he had.

One of the regular patient families in those early days was a single parent and her six children. The mother was a third-generation welfare recipient. Late on a Saturday night when the mother was out in Waikiki, she suddenly passed out and was taken by her friends to the emergency room at St. Francis. She had regained consciousness by this time, and the emergency room attendants wanted to know her family doctor.

She said, "Dr. Judd."

They questioned her, "THE Dr. Judd?"

She repeated: Dr. Judd.

She was placed in a ward. She said her care was like she had never known: "Even the doctors would come by and ask me to extend their greetings to Dr. Judd." Charlie's level of caring and commitment affected the way that big hospital cared for his patient.

Without fail, every Wednesday afternoon Charlie would drive to Kalihi to see patients in the trailer in the parking lot at Kokua Kalihi Valley. It was during these times, the special times at his country home and at KKV holiday parties, that he instilled in all of us privileged to work with him his unique message of caring for others. Many times he would describe someone who exhibited a caring spirit as "well-motivated," a phrase we came to learn meant "to give your very best to another without concern for personal gain."

Charlie was well-motivated. When he spoke at meetings of the board of directors or at professional medical meetings, I would often hear him praise the work of those around him — never calling attention to his own efforts.

Charlie has provided for us a vision of what health care can be. Time and time again he would emphasize the necessary "working together" in providing care. He supported the family-caring network of the Samoans — a family member at the side of a patient in the hospital at all times. He was a proponent of ancillary health-care workers. As he would say, "If it weren't for the community outreach workers, whom the patients trusted, I wouldn't see any patients at the clinic." Motivation was much more important than licensure or professional protectionism to Charlie. He always utilized the skills of each co-worker to the maximum. And the highest standard of excellence was expected of all care-givers, regardless of the status or personality of the recipient of care.

Charlie was a gift to all of us who had the privilege of sharing a moment of life with him. His values and dreams will live on in the lives of those he touched.

Thank you Charlie for having been a friend.

* Executive Director,
Kokua Kalihi Valley

CITY AND COUNTY OF HONOLULU

Resolution

The Council
of the City and County of Honolulu

honors the memory and celebrates the extraordinary life of

DR. CHARLES S. JUDD, JR.

who contributed his medical skills and his human compassion to the people of Hawaii and Western Samoa and who lived a life full of appreciation of the history and tradition of Hawaii.

Charles Judd followed the missionary example of his family in his choice of profession and his dedication to serving people in need of his skills. In addition to maintaining a medical practice that frequently served patients with financial need, he was a founder of a free medical clinic that cared for many of Honolulu's neediest residents. His work in Western Samoa as a volunteer surgeon brought him a degree of gratitude and respect that was expressed at his memorial service with a presentation made only once before to a person who was not of Samoan royalty.

Charles Judd was a scholar as well as a physician, and he loved history and Hawaiiana. He taught medical history at the University of Hawaii and participated in explorations and treks that helped in the development of a greater appreciation of the special quality of Hawaii.

Over the years, Charles Judd was honored for his achievements and his contributions to the community. In 1968 the Hawaii Medical Association named him Hawaii's Physician of the Year, citing his volunteer work as a surgeon in Western Samoa. In 1979 he was named one of the first winners of the Honolulu Advertiser's Thomas Jefferson Awards for outstanding volunteer work. But regardless of the honor and reverence in which he was held, Dr. Judd remained a modest, gentle man, known for his friendliness and his special quality of caring for people.

On behalf of the people of the City and County of Honolulu, the Council offers its condolences to Dr. Charles Judd's wife, Mary, and the other members of his family and expresses its great appreciation for his life of service and outstanding achievement.

Date of Introduction:

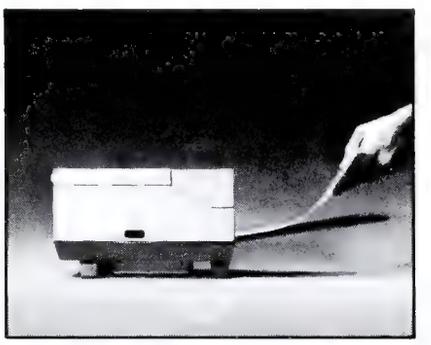
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Honolulu, Hawaii



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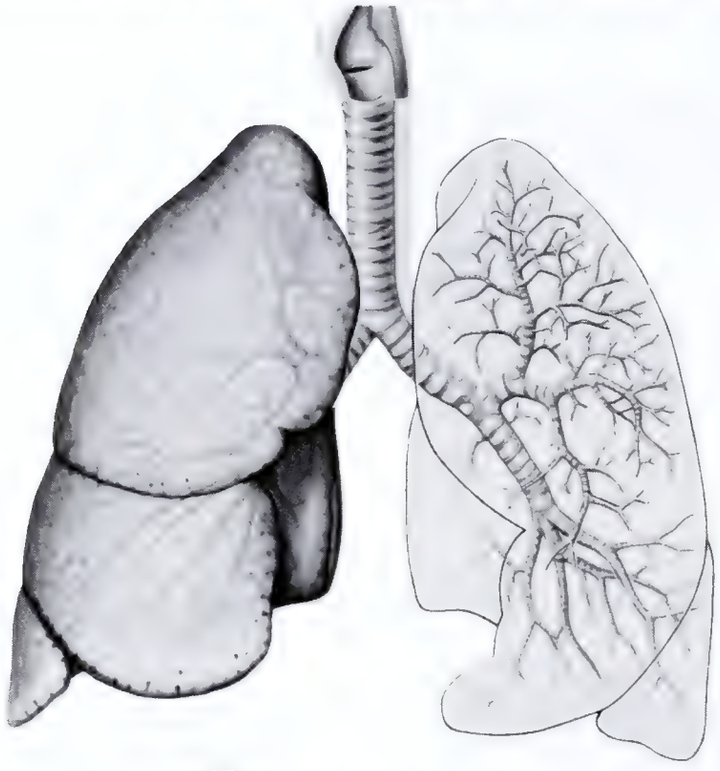
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250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci)

Contraindication:
Known allergy to cephalosporins

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology:
- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061787L]

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Excerpts from Testimonials to Charles Judd Jr., MD

"It is a pleasure to extend my congratulations and best wishes to the Hawaii Medical Library on the grand occasion of its 75th anniversary of service to the people of Hawaii. The library has for many years been the repository of salient information on discoveries in medicine, and I know that it will continue to fulfill its role with distinction in the years to come.

"It is especially fitting that the HAWAII MEDICAL JOURNAL should publish a special issue honoring the medical library and that it should be dedicated to the late Dr. Charles Judd.

"Born of a missionary family, Charlie Judd, in his career personified the best traits of the family calling, giving freely of himself for the benefit of others.

"He worked at Kalaupapa, practiced in Honolulu, served with great distinction for several years as the only surgeon and teacher of surgery in Western Samoa, was a member of the faculty in surgery of the University of Hawaii Medical School and chairman of its Department of Medical History and was chief of general surgery and a trustee of The Queen's Medical Center.

"He founded Kokua Kalihi Valley Comprehensive Family Health Center to aid immigrant and low-income families and was chairman of the Marimed Foundation, which delivers much-needed health care to residents of the Marshall Islands.

"Beloved by his students, Charlie was annually called upon to administer the Hippocratic Oath, and he played a most active role in his church and many community organizations. He was a board member of the Hawaii Medical Library from 1970, served two terms as its president and was secretary to the board at the time of his death.

"I commend the Hawaii Medical Library for its outstanding service to the community and the HAWAII MEDICAL JOURNAL for recognizing the library and remembering a distinguished and respected member of the healing profession."

—John Waihee
Governor of Hawaii

☆ ☆ ☆

"This is a very special edition of the HAWAII MEDICAL JOURNAL, which commemorates the Hawaii Medical Library's 75 years of service to the people of Hawaii and the Pacific Basin.

"It is especially fitting that this issue is dedicated to the memory of Dr. Charles S. Judd Jr., whose untimely passing last July left a large void in the medical world of Hawaii.

"Dr. Judd came from one of the oldest and most influential missionary families in Hawaii, and he was, himself, one of the giants of his profession — a caring man whose healing touch and generosity brought comfort to all who came in contact with him.

"On behalf of the people of the City & County of Honolulu, I extend best wishes to the Hawaii Medical Library for its continued success."

—Frank F. Fasi
Mayor
City & County of Honolulu

"We all know and admire and miss Charlie deeply, a superb, caring physician who devoted himself to his patients and friends. Would that more of us could live by his principles, the world would be a better place."

—John Lowrey, MD
Kawaihae, Hawaii

☆ ☆ ☆

"It is very satisfying to know that your special issue on the Hawaii Medical Library will be dedicated to Dr. Charles Judd.

"Like one of the blind men describing the elephant, I knew only a part of Charles Judd — through some of his community work and through the Social Science Association where he was a third-generation Judd family member and where I was his assistant recording secretary.

"Even a small glimpse of Charles Judd, however, was enough to make one aware that here was a special human being — rich in personal warmth, rich in talent, rich in his dedication to those around him.

"I guess a world of all Charles Judds wouldn't be problem-free, but it would take us a lot closer to Utopia than we are now."

—A.A. "Bud" Smyser
Contributing Editor
Honolulu Star-Bulletin
Feb. 4, 1988

☆ ☆ ☆

"It is especially fitting that this special issue of the HAWAII MEDICAL JOURNAL commemorating the 75th anniversary of the Hawaii Medical Library is dedicated to the late Dr. Charles S. Judd Jr.

"Throughout his life, Dr. Judd dedicated himself to serving his fellow man, following in the tradition established by his great-grandfather, Dr. Gerrit P. Judd.

"The lives he touched reflected his deeds, as people from all walks of life joined in memorializing him after Charlie's untimely passing last year. As a practitioner and educator in the healing arts, Dr. Judd had countless admirers and friends. Known for his keen interest in Hawaii and the Pacific, Dr. Judd was truly catholic in his broad range of interests.

"He was indeed a Pacific renaissance man of many dimensions. Above all, he will be remembered for his lifelong commitment to humanitarian pursuits and the welfare of the people he served so selflessly.

"Dr. Judd will remain a shining inspiration to all who love Hawaii and everything aloha stands for."

—John C. Lewin, MD
Director of Health
State Department of Health

"For over 150 years, the name Judd has been synonymous with service to Hawaii and the Pacific. Throughout the later years of the kingdom of Hawaii and into the ensuing years (all the way) to statehood, the Judd family through the generations has unstintingly assisted wherever there was need. As the University of Hawaii's School of Public Health and John A. Burns School of Medicine continue this tradition, they follow in illustrious footsteps.

"But Dr. Charles Judd was, in addition, a very special part of the University of Hawaii, and his presence will remain in the generations of medical students now practicing and training others. His genuine humaneness and concern for students led to his being asked year after year to administer the Hippocratic Oath, surely one of the highest moments in a budding medical career, and one that is shared only with those most trusted and respected. As part of the medical school team, Dr. Judd was assistant chief of surgery of the Integrated Surgical Residency program and chief of general surgery at Queen's Hospital as well. In those capacities, he earned the high respect and esteem of those he worked with. His patients spanned the Pacific and were drawn from all walks of life.

"One of the measures of the value of a life is in the permanent contributions that have been made. Dr. Judd has left us many. In addition to playing a major role in forming the University's medical school — I think here of the the Kokua Kalihi Valley Comprehensive Family Health Center, the Hillebrand Medical History Society of Honolulu, and his service as chairman of the Marimed Foundation — his continuing commitment to bring medical attention to those people in need spread throughout the Pacific.

"It is entirely fitting that we honor Dr. Judd at the same time as we recognize the 75th anniversary of the Hawaii Medical Library. Dr. Judd was himself a medical historian, and he was a great supporter of the library. Future generations of medical students and practitioners will continue to benefit from his wisdom and foresight whenever they use the reference materials carefully gathered for their use.

"Many lives have been improved and saved through Dr. Judd's dedication and kindness. I know that his legacy of caring and commitment to the Pacific will remain as an inspiration to us all."

—Albert J. Simone
President
University of Hawaii

☆ ☆ ☆

"Dr. Judd assisted in the growth and development of Kuakini's medical staff by nurturing an active educational program for its members. The staff also recognized Dr. Judd for his friendship, enthusiasm and continued support of the Center and its mission to serve the community."

—Edward Yamada, MD
Chief of Staff
Kuakini Medical Center

On behalf of Kuakini Medical Center, Yamada presented a plaque honoring Judd and made a contribution to the Judd Memorial Fund of the Hawaii Medical Library.

☆ ☆ ☆

"Charlie was a wonderful physician and a fine human being . . . the kind of man we should all try to emulate. We will all miss his kindly, helpful voice."

—Alan Pavel, MD
Orthopedic Surgeon
Honolulu

"Like his great-grandfather, Dr. Geritt P. Judd . . . Charles Judd was a medical missionary. He served in Western Samoa, which at his funeral service recognized his work with an honor accorded previously only to Robert Louis Stevenson. No member of the Association has had a longer or closer association with our history. (Charles') grandfather, Albert Francis Judd (1839-1900), was elected a member in 1883. His father, Charles Sheldon Judd (1881-1939), in 1925. Three of his uncles, Arthur Francis Judd, Dr. James R. Judd and the Rev. Henry P. Judd, were also members."

—Social Science Association of Hawaii

☆ ☆ ☆

"His *mana* will always be with us. It will continue to inspire us to carry out the great humanitarian mission of the queen who founded us, because Charlie in his life personified and exemplified that mission."

—Board of Trustees
The Queen's Medical Center

☆ ☆ ☆

"The medical schools, the committees and the American College of Surgeons have lost a fine worker, supporter and friend."

—Frank Padberg, MD
American College of Surgeons
Chicago

☆ ☆ ☆

"There could be no more fitting tribute to Charlie Judd than to dedicate this issue of the HAWAII MEDICAL JOURNAL to him on the 75th anniversary of the Hawaii Medical Library.

"My fondest memories of Charlie date back to the 1950s when we both volunteered our services to 'Kokua Samoa' at the request of the Hawaii Medical Association. Dr. Weldon, medical director of American Samoa, had requested the HMA to assist in recruiting surgical coverage because of the absence of any surgeon in Pago Pago.

"After 10 days of serving as the only surgically oriented MD, I welcomed with considerable relief Charlie, Mary and family to 'Pango.' I was able to transfer to Charlie's service all minor surgeries, as well as C-sections, bowel resections and thoracotomies (for empyema) that had been treated primarily by an ex-plantation doctor turned orthopod, namely myself!

"For the next six weeks we collaborated in trying to solve many surgical and orthopedic problems of the 'primitive' type current in American Samoa. More gratifying, however, were the many discussions we had about the overriding local problems common to developing countries, such as medical education and training, the taking of proper histories and the need for resources such as a medical library upon which continuing medical education could be centered. Charlie's forte was the history of medicine, and he felt that, too, needed a boost in Samoa.

"I am certain that these weeks helped focus our later interest in the Hawaii Medical Library; for years we shared the joys and problems that came up as we served on the Library Board together.

"Charlie subsequently returned to Samoa for a period of three years; he and his family were glad to sacrifice a bit in their zeal to dedicate themselves to the Samoan people.

"His later return to the University of California to obtain his degree in medical history added a lasting influence on our HML, as well as on the School of Medicine at the University of Hawaii."

—Ivar Larsen, MD

"One of the greatest advantages for the nascent medical school at the University of Hawaii in 1964 was the presence in Honolulu of about a dozen doctors who were literally waiting for the medical school to 'happen.' They were all quietly but emphatically supportive, and it is interesting to note, in retrospect, that they were all conservative in their practices and lifestyles.

"Charlie Judd epitomized this group, and yet in some respects, he was actually ahead of the formal activities of the medical school. We now find ourselves with well organized and structured arrangements to carry out functions that he just *did*. His three years in Western Samoa were undertaken out of his perception of what was right and good, and yet he also laid out a path for the medical school's present extensive commitments to the Pacific Islands. Similarly, our commitment to the poor of our own State is following, with the inescapably greater formality, the deceptively casual pattern he established with Kokua Valley Clinic.

"He was a superb teacher with a deep fund of knowledge, an even deeper fund of wisdom and endless patience. Patients and students alike were drawn to the simple dignity, the *gravitas*, of this man who never postured nor, seemingly, had anything to prove. Whether it was articulated or not, he was the kind of person whom everyone wished they were more like.

"Lest the foregoing give an impression of remoteness, it should be noted that he and Mary were foci of much of the limited social life of medical students. For example, the luaus at their country place will remain in the minds of our former students longer than action potentials.

"To illustrate: A medical student was conducting a special project under Charlie's supervision and was, frankly, not getting on with it. Someone commented, 'He's even managed to annoy Charlie Judd — which seems to merit some kind of award.' This quaint little incident has stuck in my mind as the very essence of the way he adopted the medical school into his magnificent life.

"At the convocation ceremony for our graduating students, Dr. Charles Judd administered the Hippocratic Oath. Every year the great hall would be totally silent as his quietly dignified voice recited the ancient admonitions. Sadly, we contemplate a deeper silence."

—Terence Rogers, PhD
Former Dean
John A. Burns School of Medicine
University of Hawaii

☆ ☆ ☆

"Dr. Charles Judd Jr. has rendered outstanding service not only to medical care but to excellence in teaching, his greatest art. His medical knowledge, wit and exemplification of the meaning of aloha have touched all who knew him."

—Myron Shirasu, MD
Chief of Staff
The Queen's Medical Center

☆ ☆ ☆

"Dr. Judd has been a great teacher and colleague. His words of encouragement and nonverbal expression of understanding made all the difference to our patients. They all tell me how so much better they felt when he was there."

—Jinichi Tokeshi, MD
Family Practice
Honolulu

"Never will I forget being a patient under his gentle and loving care back in 1966 at Motootua Hospital in Apia, where seeing him approaching was enough to drive away the pains and suffering. His gentle touch, whisper and smile was medicine enough for the sick he so kindly cared for."

—Pita Leumaga
Apia, Western Samoa

☆ ☆ ☆

"Charlie was as close to being a saint as any man I've known. But Father Damien and St. Francis of Assisi didn't achieve what they did only by being gentle. Charlie, like them, was *strong*. He had a *will!* On an average day at the free medical clinic in Kalihi, he'd see 27 patients in two hours after being up half the night on an emergency. It was an amazing combination of gentleness and strength. I think that's why the rainbow appeared over Central Union Church after the service."

—Bob Krauss
Columnist
Sunday Star-Bulletin & Advertiser
Aug. 9, 1987

☆ ☆ ☆

"Dr. Charlie loved Hawaii and all its people, old and new; he loved the world and all its people, too. He was an active member of PSR, the physician organization dedicated to trying to prevent a nuclear war. We will remember Charlie as a physician after the model of Hippocrates and Aesculapius, a physician who was concerned with all of man's many ills of the spirit as well as of the flesh. His life has shown us 'the way.' "

—J.I. Frederick Reppun, MD
Coordinator, PSR/Hawaii

☆ ☆ ☆

"Yes, I knew Charlie fairly well. Of those who didn't know him, many know of him. He wasn't famous, but his reputation for patience, for empathy and for thoughtfulness followed him wherever he went. He was recognized by his peers and by his patients for his human qualities; he was devoted to the relief of suffering. He became known for his diagnostic and his surgical skills. For him, working all night and the next day were things that medicine expected of him, and he accepted that.

"Charlie was one of the few I knew who was totally committed to medicine and to the well-being of his fellow man.

"Sometimes he did meet the needs of his family — Mary, his wife, and children Bonnie, Kala and Tom. Their house, high on Tantalus, was bounded by part of the forest. There was a large Puakenikeni tree near the front door. All of this was in accord with Charlie's boyhood, for his father had been a government forester. But their house was neither elaborate nor was it austere. It was comfortable. If one listened with the heart, one could feel the 'vibes' of family strength and goodness.

"His humanistic qualities were just Charlie, and their reservoir was inexhaustible. I swear he knew the first and last names of every nurse who worked in the hospital.

"In Western Samoa, Charlie lived and worked by an exhaustive schedule, a schedule that could have ruined many other men. With Charlie living on only a few hours of sleep a day, Mary became the glue that bonded that family; she, too, was committed to his ideals.

"Wherever Charlie went, he left his mark. When he, Thurston Twigg-Smith and Bob Krauss hiked the perimeter of

the Big Island, they slept in the open or in caves. I asked Charlie if they saw many artifacts. 'Oh, hundreds,' he replied. He did not choose to take any, nor did anyone else. 'We left them where we found them,' he said.

"For us who knew him, he left too soon, but who are we to say? Charlie had a handle on the meaning of life, and, even during death, he never let go."

—Bob Dimler, MD
Pediatrician

☆ ☆ ☆

"Charlie, you leave us with memories of our younger days in a very different Hawaii and particularly a very different Honolulu. The Honolulu of our youth was where the new Royal Hawaiian Hotel dominated the Waikiki skyline, where there were no skyscrapers and where you would always run into a friend if you walked downtown. . . ."

"I also recall the long drives with six of us packed into 2-Gun's small Austin to your folks' place in the country near Mokolii. Remember the Christmas break in January 1940 when we tried to get you to accompany us to Lahaina on the fantail of the old Hualalai steamer? You said that you had to study so you would be ready for the next semester. We could not convince you that you would learn about other things in Lahaina and the hike through Haleakala. . . ."

"After we both returned to the Territory of Hawaii and settled into practice, you remained a complete physician to your patients even though you expertly practiced your chosen specialty of surgery. I always felt that you regarded one's decision to become a physician more of a calling from Aesculapius, the God of Medicine, rather than a decision that one would make entering a business or most professions. I do not believe that you really accepted the physician as being another 20th century scientist rather than part-doctor, part-priest. Your leaving Hawaii to practice in Samoa at the peak of your medical capabilities was much more in keeping with the medical missionary of the past, rather than a very modern scientific surgeon.

"Even more recently as secretary at the Social Science Association meetings, I was struck with the obvious enjoyment that it gave you to announce the 100-plus year of the meeting of the Association followed by detailed minutes of the previous meeting that you carefully prepared. These most always were more interesting than the original presentation.

"As the years passed, we all grew older but I do not think we changed all that much. I was reminded of you as a younger Charlie on more than a few occasions. I am thinking of the time a few years ago when the Damon Book Club was hiking down the trail on Kauai. You and I were walking a bit ahead of the rest. As you looked down on the beach at Hanakapiai, you stopped, turned to me and said, 'Gil, we can't go on any further because there are naked girls on the beach down there.' This was long after the hippy movement had died out on the Mainland but a small colony remained on this remote end of Kauai. I said, 'Charlie, you're absolutely right, but neither of us nor the rest of the group behind us has anything to fear from those naked people down there, nor do they from us.' We all laughed and proceeded down the trail.

"Charlie, some of us knew you as a youngster, some as an adult and some as both. Some knew only the more evident light side, some the rare dark side. None of us knew you as well as Mary, but all of us will miss you very much."

—F.I. Gilbert Jr., MD
Straub Clinic
Honolulu



Charlie Judd pictured with mortarboard at a graduation.



Charlie Judd with Mokolii in the background.



The Judd family (left to right): Charles III ("Kala"), Bonnie Louise, and Thomas ("Tom").



Charlie Judd delivers the Hippocratic Oath at a John A. Burns School of Medicine, University of Hawaii, graduation — just one of the many he did at the request of the students.

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The Publications of Charles S. Judd Jr.

Hawaii Medical Journal:

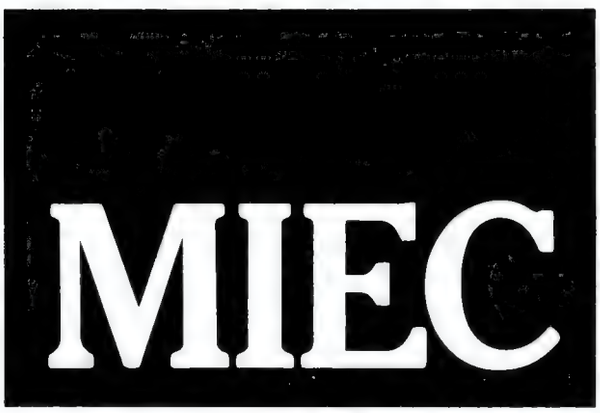
1. Judd CS Jr, Hill RL: Internal hernia. *Hawaii Med J* 14:304, 1955.
2. Judd CS Jr, Hill RL: Emergency treatment of burns. *Hawaii Med J* 15:24, 1955.
3. Judd CS Jr: Objectives in surgery of duodenal ulcer. *Hawaii Med J* 16:264, 1957.
4. Judd CS Jr, Hill RL: Some problems in blood and plasma replacement. *Hawaii Med J* 17:452, 1958.
5. Kuresa K, Eves L, Judd CS Jr: Treatment of burns and pyoderma with 0.5% silver nitrate ointment. *Hawaii Med J* 28:457-8, 1969.
6. Henderson WS, Ichinose C, Goto U, Tom B, Stewart J, Sage W, Judd CS Jr, Gresham S, Thompson H, McDonald B, Kim M: Plan and organization for utilization review at Queen's Medical Center. *Hawaii Med J* 34:15, 1975.
7. Judd CS: Anglophilia — 1978. *Hawaii Med J* Mar; 38(3):72-4 1979.
8. Judd CS Jr: What you give away, you keep forever: Surgery History (Dr. Rogers Lee Hill). *Hawaii Med J* Sep; 38(9):271-4, 1979.
9. Judd CS Jr: The Hawaii Medical Association through the years. Editorial. *Hawaii Med J* 40:270, 1981.
10. Judd CS Jr: Plantation health. *Hawaii Med J* Apr; 41(4):1216, 118, 1982.
11. Judd CS Jr: Voluntary health insurance plans. Editorial. 41:202, 1982.
12. Judd CS Jr: Internships and residences. Editorial. *Hawaii Med J* 32:50, 1983.
13. Judd CS Jr: Military hospitals. Editoral. *Hawaii Med J* 32:50, 1983.
14. Judd CS Jr: The individual physician's role and the sanctions of TEFRA — Editorial. *Hawaii Med J* 42:356-358, 1983.
15. Judd CS Jr: Some early physicians of Hawaii — 1800s. *Hawaii Med J* Jul; 43(7):250, 1984.
16. Judd CS Jr: Leprosy in Hawaii, 1889-1976. *Hawaii Med J* Sep; 43(9):328-9, 333-4, 1984.
17. Judd CS Jr: John A. Burns School of Medicine, University of Hawaii. Editorial. *Hawaii Med J* 43:133, 1984.
18. Judd CS Jr: "Spurious." *Hawaii Med J* Jul; 44(7):262, 1985.

National and International Journals and Exhibits:

19. Judd CS Jr, Hill RL: The management of massive gastrointestinal bleeding. *JAMA* 155:1200, 1954.
20. Judd CS Jr, Hill RL: Pancreatoduodenectomy for leiomyosarcoma of the duodenum. *Ann Surg.* 139:103, 1954.
21. Judd CS Jr, Civin WH, McIlhany ML: Eosinophilic granuloma of the stomach. *Gastroenterol* 28:453, 1955.

(Continued on page 237)

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PUBLICATIONS

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22. Hill RL, Judd CS Jr, Shaw WR, Boyar WT: Pancreatic ductal decompression in chronic pancreatitis with fistula. *AMA Arch Surg.* 71:710, 1955.
23. Mason CB, Judd CS Jr, Hill RL: Rupture of the gallbladder with intraperitoneal hemorrhage. *NEJM* 258:609, 1957.
24. Hunter RG, Henry GW, Judd CS Jr: Physiologic or dysfunctional incompetence of the cervix. *Am J Obstet Gynec* 81:1183, 1961.
25. Hill RL, Judd CS Jr: The history of surgical instruments. (Exhibit) 50th Clin Cong, Am Coll Surg, Chicago, Ill, October 1964.
26. Judd CS Jr, Tanaka KI: Technique of pyloroplasty for duodenal ulcer. *Ann Surg* 162:946, 1965.
27. Judd CS Jr, Torres I, Hill RL: Surgical aspects of pancreatitis. *Memorias Cirugia Octava Asamblea Medica de Occidente, Guadalajara, Mexico.* 1965.
28. Judd CS Jr: Surgery in Western Samoa. *Bull Am Coll Surg* 52:395, 1967.
29. Imo A, Eves L, Aloaina F, Judd CS Jr: Hyperparathyroidism. *J Fiji Sch Med* 3:(#1):2, 1968.
30. Eves L, Aloaina F, Judd CS Jr: The surgery of filarial hydroceles. *J Fiji Sch Med* 3:(#3)5, 1968.
31. Judd CS Jr, Eves L, Vermeulen WJ: The history of filariasis and the surgical treatment of its complications. (Exhibit) 55th Clin Cong, Am Coll Surg, San Francisco, California, October 1969; and Clin Cong, Pan-Pacific Surgical Association, Honolulu, Hawaii, October 1969.
32. Eves L, Schuster G, Judd CS Jr: The use of a 0.5% solution of silver nitrate in treatment of burns. *J Fiji Sch Med* 4:(#3)2, 1969.
33. Imo A, Eves L, Aloaina F, Judd CS Jr: Earlier pericardiectomy for acute constrictive staphylococcal pericarditis. *J Fiji Sch Med* 5:(#3), 1970.
34. Judd CS Jr: Ancient stench and present-day effluent. *Calif Med*, Feb; 114(2):44-8, 1971.
35. Judd CS Jr: Skull injury from stoning, in Western Samoa and in history. *Cal Med* 112:14-18, 1970.
36. Judd CS Jr: Depopulation in Polynesia. (Master's Thesis), Dept of Hist Health Sci, U CA, San Francisco, CA, 1970.
37. Judd CS Jr, Rush BF Jr, Eves L, Aloaina F: Saline solution as plasma expander in a hospital without a blood bank. *Tropical Doctor* 1:104, 1971.
38. Judd CS Jr: Ancient stench and present-day effluent. *Cal Med* 114:44, 1971.
39. Tom BC, Gresham SC, Goto U, Henderson WJ, Judd CS Jr, McDonald BA: Pay the peers. Utilization review with a team approach and payment of physician reviewers. *JAMA* Feb; 16:235(7):738-41, 1976.
40. Judd CS Jr: Osler and Mitchell. *Trans and Studies of the Coll Phys* 45:99-104, 1977.
41. Judd CS Jr: Depopulation in Polynesia. *Bull Hist Med* 51:585-93, 1977.
42. Arrington P, Judd CS Jr: Cecal diverticulitis. *Am J Surg* July; 142(1):56-9, 1981.

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A 'Fax' in Your Future?

Norman Goldstein, MD*

Consider a facsimile ("fax") unit in your office, your laboratory — perhaps even in your home.

Fax machines were hard to locate in Hawaii just a few years ago. Even many large businesses and law firms did not have the capability to transmit documents and photographs via ordinary phone lines. Telex and TWX (Western Union) have, of course, been around for years and have connected Hawaii with the Mainland and the rest of the world. Telex/TWX messages must be manually typed on a keyboard before any transmission can take place. This is time-consuming and expensive! Telex/TWX also is limited in that graphics such as drawings, charts, EKGs, graphs, handwriting and photographs cannot be transmitted except by mail or courier.

For years, all we had were Telex and TWX. Then came the "overnight" couriers, messenger services and the U.S. Postal Service's Express Mail.

Then came fax!

The technology of fax was developed in the late 1960s by Rockwell International Corp. Progress was slow until Japanese firms started producing facsimile units. The Japanese development of fax machines was understandable. The Japanese written language, the *kanji*, has thousands of characters instead of just a few dozen. Keyboard transmission of Telex/TWX was just not satisfactory for Japanese data transmission. Hence, the Japanese developed the modern fax units of today, and the *worldwide* capability of data transmission including high-quality graphics.

In the past, if you wanted to "fax" a message or photograph you had to locate a company or office that made a business of sending and receiving messages for their customers in that way. One such service in Hawaii was that of Louise Haller, who had a telecopy service in the former Alexander Young Hotel Building in downtown Honolulu. When the AYB was demolished, Haller moved to another downtown location to continue her valuable service to Hawaii business and legal customers. She has just recently retired; Hawaii owes much to this communications pioneer.

Because my wife and I travel to the Mainland frequently for medical meetings and lectures, as well as art commissions and exhibitions, I found I had to be in constant contact with my office in Honolulu via Telecopy service. In additon, my other civic and cultural activities required rapid visual transmission of documents, plans and photographs. However, even with Federal Express, other courier services and the U.S. Postal Service's Express Mail, it sometimes took three days to get documents to or from the Mainland East Coast. It was just not fast enough for me.

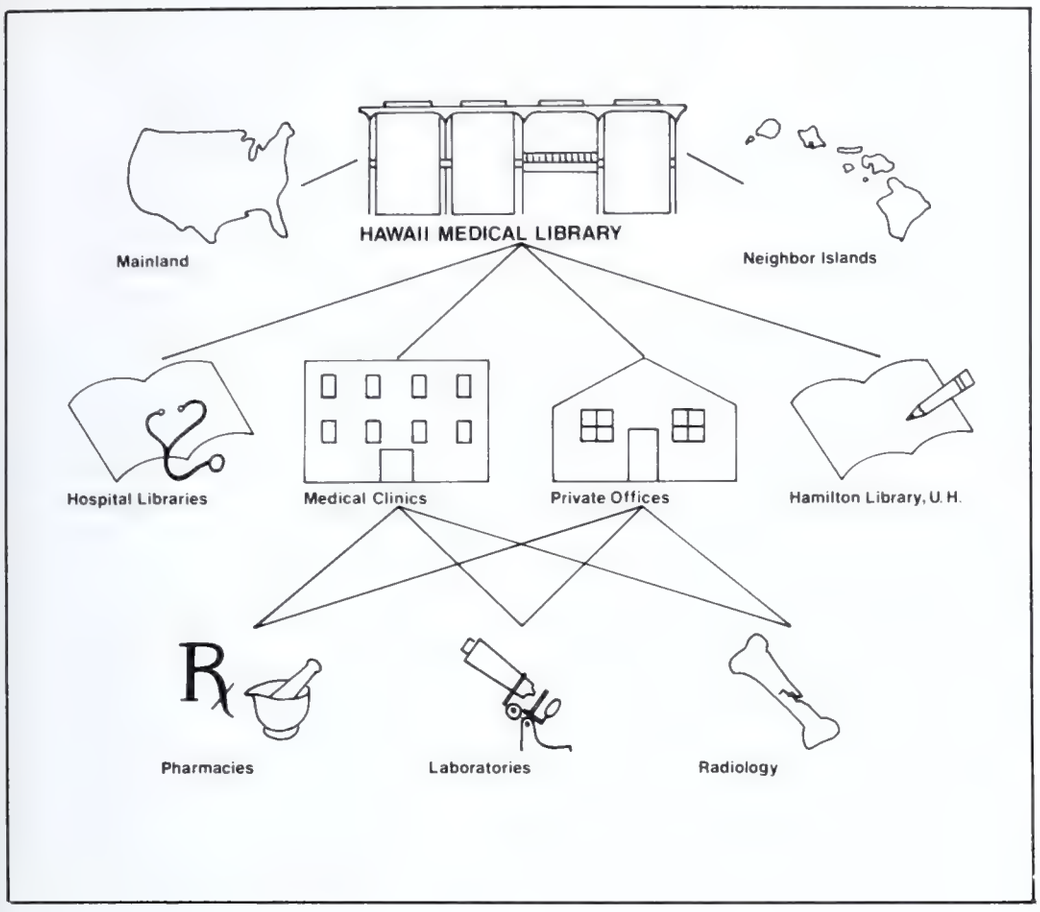
I have known about fax units for several years, but I thought the cost of the units and the phone company usage charges were prohibitive. Not so then, and definitely not so now!

I have three offices — one in downtown Honolulu, a satellite in Kahala and one in Kahului on Maui. Perhaps I do get more involved with cultural, artistic and social organizations than some other physicians in Hawaii, but even the small office, and definitely the small and large group practices will greatly benefit from the use of fax units today. Don't delay because of anticipated price reductions or smaller-sized units. They will, undoubtedly, be less expensive (the cheapest unit now is about $900) and future units will have many automatic and special features. However, you probably won't need these added features anyway.

In the Dec. 3, 1987, issue of Pacific Business News a headline stated, "It's hard to find an office that lacks a fax." The special report, of course, referred to *nonmedical offices*. Even today there are *very* few solo medical and small group practices in Hawaii that have fax units. Only one of the major clinics in Honolulu has a fax. The Hawaii Medical Library

Accepted for publication March 1988

*President, Hawaii Medical Library and director of Pacific Laser, Honolulu.



still doesn't have a fax — *yet*.

Mainland hotels now are offering "Hotelecopy" service, where for $9 plus the cost of the long-distance call, you can transmit a message back to your office, or clinic (or home!) — up to 10 pages in a matter of minutes.

As president of the Hawaii Medical Library, I have proposed fax capability in our library. Whether your office is hospital-based, downtown Honolulu, North Shore Oahu, or on the Neighbor Islands, a fax transmission of an urgent medical reference from HML can be of tremendous value in patient care, as well as in your academic and other professional activities. At present, the HML is not able to provide fax service of your med-line search or the Xerox copy of your requested journal references, but, we hope, will be able to do so in the near future.

Of course, there will be additional costs involved for this special service. The reference must be located and the journal or book photocopied before it is transmitted to you via the fax unit. However, for the urgent or important material, it will be well worth the extra cost.

The Hawaii Medical Library is studying the possibility of utilizing the fax system to communicate between the University of Hawaii libraries and the various medical libraries in the State.

The potential uses of fax units in medicine are unlimited and very exciting! Imagine: Truly *stat* lab tests without your nurse having to spend five or 10 minutes on the phone; pathology and X-ray reports as soon as they are prepared by the path or radiology secretary; urgent consultations instantly transmitted in typewritten form to and from specialists, general practitioners or family physicians and others; copies of your progress notes, EKGs, lab tests, etc., on patients you see at a satellite office or clinic when the chart is not there with the patient!

Space herein does not permit more technical information pertaining to fax, but there are numerous fax companies in Hawaii and their sales personnel can discuss and demonstrate their various products to you.

Don't wait. Look into it and get a fax unit. There is much "Joy in fax." Once you get a unit, you will say, as I do, "How did I ever function before fax?"

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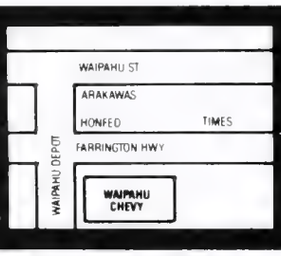
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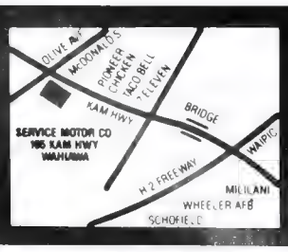
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The Historical Video Recordings by Charles S. Judd Jr.

Between 1981 and 1985 Charles Judd videotaped interviews of some of the great names in Hawaii medicine. This series of 25 video recordings is available for viewing or loan from the Hawaii Medical Library.

In addition, two video recordings featuring Dr. Judd are also available — one in which he was interviewed Aug. 8, 1982, by George Mills, MD [W2 100 J 192], and the other in which he discusses Practical Medicine in Polynesia [WC 680 VT-1].

1.	Harry L. Arnold Jr.	8/25/83
2.	Clarence M. Burgess	8/23/83
3.	Ralph B. Cloward	3/15/83
4.	Robert B. Faus	11/8/83
5.	Paul W. Gebauer	8/4/83
6.	William W. Goodhue	5/10/85
7.	Unoji Goto	4/25/84
8.	Will J. Henderson, Adm.	8/3/84
9.	Ira D. Hirschy	1/26/82
10.	William John Holmes	3/23/83
11.	Homer Izumi	3/16/83
12.	Harold M. Johnson	7/28/81
13.	Ivar J. Larsen	9/8/81
14.	Richard K.C. Lee	2/23/82
15.	Donald C. Marshall	1/26/82
16.	Frank McDowell	11/19/80
17.	Robert D. Millard	7/28/81
18.	George H. Mills	8/26/82
19.	Walter E. Quisenberry	8/31/83
20.	J.I. Frederick Reppun	4/13/83
21.	Terence A. Rogers, PhD	8/3/84
22.	Richard Y. Sakimoto	7/22/81
23.	Pauline G. Stitt	2/23/82
24.	Kazushi Tanaka	8/4/83
25.	Burt O. Wade	5/10/85



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(Continued on page 242)



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OTED

(Continued from page 240)

sociation, has been awarded a $270,000 grant from The Pew Charitable Trusts to improve the retention of registered nurses in hospitals.

The grant will fund research to identify a comprehensive model for retaining registered nurses and disseminate the model to health-care industry leaders and policy makers. As many as 20% of nurses switch jobs each year, AHA data has shown, at a cost to the industry of over $3 billion in 1987 alone.

"With this grant, we hope to discover the key factors that will lead to a more stable nursing workforce, and therefore, to better patient care," said Connie Curran, RN, EdD, AHA vice president for health-care management and patient services. Curran and Ann Minnick, PhD, director of research of the AHA Division of Nursing, are co-principal investigators on the project.

"By sharing this information with the field, we hope that some of the $3 billion which hospitals put toward nurse-recruitment efforts can instead go toward better salaries for nurses," Curran added.

In the coming year, Curran and Minnick will work with a 10-member advisory panel to identify hospitals with low nurse-turnover rates. A survey of these hospitals will form the basis for the nurse-retention model, which in turn will be used to develop a monograph, an informational campaign, and a teleconference.

The Pew Charitable Trusts, Philadelphia, support nonprofit organizations dedicated to improving the quality of life for individuals and communities and encouraging personal growth and self-sufficiency.

NEW MEDICAL VIDEO UPDATES PHYSICIANS ON NUTRITION AND DIET—Thirty-four million Americans are obese, accounting for about 20% of the population. This is a nationwide health problem, one in which many physicians have no formal education. Unfortunately, physicians often become involved only after obesity has become a bigger, more complicated issue, such as a cardiac risk factor, or when diabetes is involved.

Bringing physicians up-to-date on nutrition and weight control is the goal of a new telecourse produced by the Network for Continuing Medical Education (NCME). "Current Concepts in Nutrition" was released in mid-March to some 800 hospitals and medical schools throughout the country.

(Continued on page 244)

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(Continued from page 242)

The program features two experts in the field of nutrition: Brian Morgan, PhD, acting director of the Institute of Human Nutrition at Columbia University College of Physicians and Surgeons, and Kathryn M. Kolasa, PhD, RD, professor and section head of Nutrition Education and Services in the Department of Family Medicine at East Carolina University School of Medicine. They are joined by Rafael C. Sanchez, MD, professor of Family Medicine and director of the Research and Development Division of East Carolina University School of Medicine, who serves as moderator.

Using the most recent clinical findings, Morgan and Kolasa provide an overview of nutrition. They focus their attention, however, on treating the obese patient, especially those in the high-risk category. They also address the special problems of the hypercholesterolemia patient, giving the new federal guidelines for defining this disorder.

Physicians who view this program will also learn how to recommend realistic weight-loss programs to their patients, including those not able to exercise due to arthritis, heart disease, or other disorders. They will also be better able to develop a dietary treatment plan for patients with uncomplicated hypercholesterolemia, explain the theories relating to nutrition and prevention of cancer, recognize new products in the food development industry, and learn how to include a comprehensive discussion of nutrition when taking patient histories.

The telecourse is co-sponsored for two credit hours in Category 1 of the American Medical Association's "Physician's Recognition Award" by East Carolina University School of Medicine and is acceptable for two prescribed hours by the American Academy of Family Physicians.

Established in 1985 with the support of Roche Laboratories, a division of Hoffman-La Roche Inc., NCME releases a one-hour videotape every two weeks. Since its founding 23 years ago, NCME has distributed over 1,200 continuing education programs for the medical profession to subscribing hospitals and medical schools throughout the U.S., Canada and Japan.

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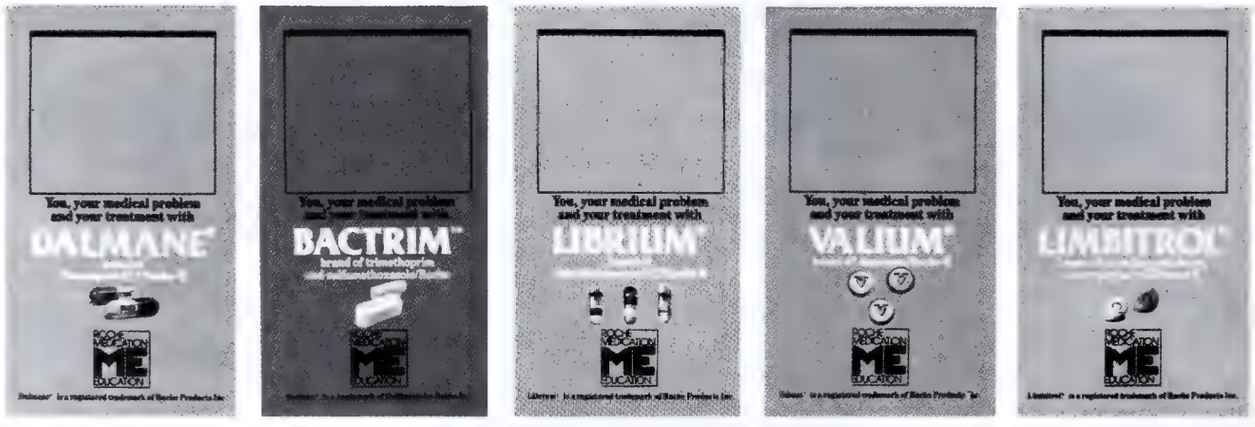
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Cholesterol: The 'In' Thing

In this issue of the JOURNAL, two pathologists of long-standing in Hawaii and of excellent repute, address the issue of serum cholesterol levels in people as a measure of health risk and the risk of dying early of the consequences of atherosclerosis, if cholesterol levels are higher than they should be.

Francis Fukunaga, as a frequent contributor to the JOURNAL in his "Clinical Pathologist's Easy Chair," discusses the "new" apolipoproteins at length and points out the value of determining their levels and the ratio of Apo-A and Apo-B as a more precise and sensitive test after preliminary screening for total cholesterol.

Paul Tamura reports on an interesting study of 15-year-olds, pointing out the importance of early evaluation if people are interested in seriously aborting the deaths of young people from atherosclerosis. He also addresses the problem that has confounded a lot of physicians and their patients, namely: How accurate are these tests?

Both writers complement each other. The matter of testing for cholesterol is no longer an esoteric, academic exercise; all primary-care physicians either will be up on the subject on their own, or their patients will be insisting on answers to their questions generated by what they read or hear in the popular media.

The November 1987 (Vol. 4, No. 6) issue of the *Lipid Letter,* which is produced by Healthmark Medical Education Programs in New York, starts with an editor's note: "The most comprehensive guidelines ever formulated on the detection, evaluation and treatment of adult hypercholesterolemia were issued by the National Heart, Lung and Blood Institute (NHLBI) last month in Washington, D.C. Designed to take primary-care physicians through a step-by-step management algorithm, the guidelines offer a patient-based approach to identifying individuals at high risk of coronary heart disease (CHD) who will benefit from intensive intervention. . . . The report strongly emphasizes the need for obtaining accurate baseline lipid readings, and makes dietary therapy the crux of patient management. . . . It also specifies, for the first time ever, what constitutes *dangerous levels of LDL-cholesterol"* (emphasis ours/Ed).

It goes on to report that "coronary risk rises progressively with total cholesterol levels above 200 mg/dl, and begins to mount steeply after 240 mg/dl."

The full report can be obtained from the NHLBI, C-200, Bethesda, MD 20892.

Highlights of the summary in the *Lipid Letter* include the following points of considerable interest: It recommends the measurement of nonfasting serum total cholesterol in all Americans aged 20 and over (Tamura says it should be started in high school youngsters/Ed).

"The LDL-cholesterol levels are . . . (a) desirable: below 130 mg/dl; (b) borderline high-risk: 130 to 159; and (c) high-risk: 160 mg/dl or above . . . markedly reducing dietary fat is not necessary to lowering the LDL-cholesterol level, as long as a substantial shift from saturated to unsaturated fats occurs."

Another remarkable statement by the panel ". . . concedes that diets designed to severely restrict these nutrients — especially fat, which contributes to satiety and palatability — often meets with poor patient compliance."

The summary places considerable emphasis on "other risk factors," well known to most physicians, in the algorithm that is a guideline for both evaluation and treatment. The reader is encouraged to review the full report.

J.I. Frederick Reppun, MD
Editor

Collaboration

In this issue of the JOURNAL, we have an article by dental surgeons George A. Wessberg, Ernest W. Scheerer, Bruno West, and Stephen Parel: "Osseointegrated Jawbone Implants for Permanent Dental and Maxillofacial Reconstruction."

Although the JOURNAL is the organ of the Hawaii Medical Association and is devoted to scientific and other articles of interest to medical practitioners, we welcome this contribution by local dentists in collaboration with one from Texas (Parel).

The article reveals the need to share knowledge between the two disciplines and the closeness of the association between medical and dental surgeons when it comes to oral and facial reparative treatment.

Here is an example of where "turf" can be shared, rather than be fought over.

J.I. Frederick Reppun, MD
Editor

(Continued on page 261)

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Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

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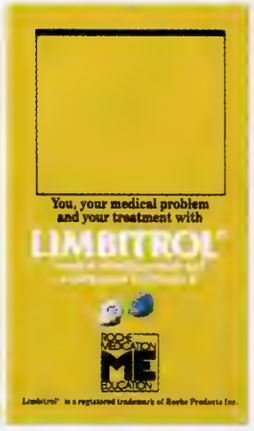
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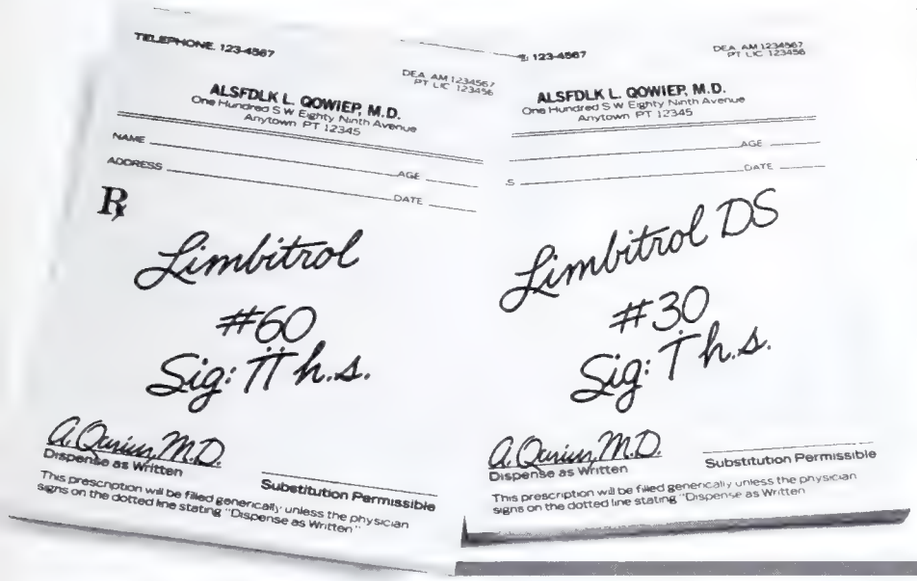
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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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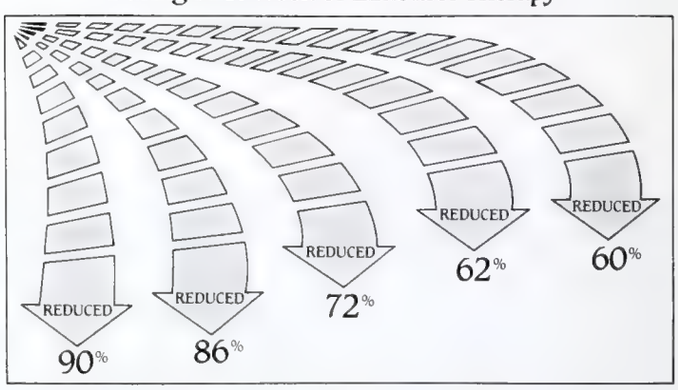
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Please see summary of product information inside back cover.



Discharge from the Hospital

In a previous issue of the JOURNAL, we talked about referrals and the need for continuity of care. In this editorial we continue to develop this theme: Continuity is vital to the patient's well-being, especially when he or she is discharged after an acute illness requiring in-patient care by several physician specialists.

The primary-care physician (PCP) is often left in the dark, especially if he is not actively involved in the in-patient care process. When discharged patients come into the physician's office anywhere from a day to weeks later, more often than not, they neither bring their medications with them, nor do they remember the names of their prescriptions, nor what they are meant to do. A patient may have a vague idea of why he or she was in the hospital but many patients may know even less about what was done to him or her; diagnoses are foreign words to many patients. To the PCP's increasing frustration, there is no discharge instruction sheet given to the patient to take to his PCP with important data for the next physician to continue care — whether that is the PCP or some other blind and deaf giver of health!

The PCP goes to the phone — or asks a harried nurse to do it: "Get that @-#-$-* (expletive deleted) doctor or hospital on the phone and ask them what goes on here!" The PCP feels stupid in front of the patient. The patient feels stupid in front of the doctor. Time is wasted. The waiting room is full of impatient patients.

Such is less often the case when a patient has been to an emergency room at night or on weekends; most of those clinics — but certainly not all — are pretty good about giving the patient an instruction sheet and referral back with at least the minimum information needed for continuing aftercare.

In this day and age of patient participation in decision-making after so-called in-hospital "patient education," there is absolutely no reason for failing to give the patient a written communication to the next "healer" in line! As far back as World War II (we weren't at the right age for World War I!), it was SOP (Standard Operating Procedure) for a patient sent back to the rear to be "tagged" successively as he went from aid station to field hospital to general hospital with diagnoses and treatments; his medical records accompanied him.

The JCAH, now named the JCACH — Joint Commission for the Accreditation of Health Care — has long since required that the patient, on discharge from an acute-care facility, be given a "paper" listing his meds with instructions on how to take them, brief diagnoses and recommendations when and where to see the doctor next.

Both hospitals and physicians almost invariably fail to follow the rules. The PCP and patients are the losers.

J.I. Frederick Reppun, MD
Editor

Lifetime Medical Television Series

Readers might remember that we have pleaded with Oceanic Cablevision here in Hawaii, at the instigation of HMA member Alex Roth, to air Lifetime Medical Television Series (HMJ Vol. 46, No. 2 Feb. '87 and Vol. 46, No. 6).

We were pleased, therefore, to receive a "Dear Doctor" letter from Jeff Smith, marketing vice president at Oceanic Cable, announcing that Channel 17 would carry this educational program on Sundays from 6 a.m. to 7 p.m. (The program started Jan. 17.) It may be presumed that every doctor received a similiar letter.

Enclosed with the letter from Smith is a program-listing covering the January and February Sundays. By the time this editorial appears in the JOURNAL, we will be into June or July, so that reproducing the program here will have no value. However, those interested can look ahead in the "Hawaii TV Digest."

We will be interested in learning how many Hawaii physicians will derive benefit and enjoyment from this programming by Oceanic Cable.

Our thanks for this offering to the profession go to Jeff Smith and Tom Rockwell, Oceanic Cable's president.

J.I. Frederick Reppun, MD
Editor

A Report from an HMA Member



Steven M. Moser,
MD, FACP*

I have just returned from a week at the end of March of this year in Managua, Nicaragua and feel the need to report my impressions concerning the state of internal medicine in that country. I base my comments on visits to two major facilities, Manolo Morales Hospital and Lenin-Fonseca Hospital, which provide the bulk of civilian internal medicine and nephrological care in the city of Managua.

It is essential to realize that internal medicine is practiced there in the context of severe restriction of basic public health. The water is turned off during the day for two to three days per week, as is the electricity. Sewage is dumped untreated into Lake Managua. There is no garbage collection and trash is discarded in the canals and streets, or burned in vacant lots. There are many fires resulting from this practice that cannot be extinguished due to lack of water in the fire hydrants. There are no enforced safety standards for vehicular traffic and inadequate public transportation for the million or so people of Managua, leading to massive overcrowding and a high number of accidents.

The earthquake of 1972 devastated the business and governmental center of Managua, and this has never been rebuilt. The war has claimed numerous casualties and left many injured and unemployable veterans. These are but a few of the major problems facing this country of 3 million.

Internal medicine and nephrology suffer from a similar pattern of basic inadequacies in manpower and equipment, as well as systematic deficiencies. Directors of Departments of Medicine present long lists of basic lacks of such items as chemistry analysis and arterial blood gas determination (nephrologists are unable to perform a potassium or a sodium determination, let alone a bicarbonate), bone marrow

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(Continued on page 273)



The Family Physician

By using "specialty" in quotes in the editoral "The Family Physician" (HMJ Vol. 46, No. 12), I would conclude that Dr. Reppun does not believe that Family Practice is a specialty. Webster's dictionary defines specialty as "a particular quality; a product of a special kind; a branch of knowledge, or professional work in which one specializes."

Family Practice not only borrows from the knowledge of other specialties, but has also developed its own knowledge base from the research of family practitioners. We have a residency training and a philosophy of practice that is unique and produces a unique kind of doctor. If he means that we don't get "special payment" for our services, then I would agree with him that we are not specialists.

The fact that medical schools do not adequately include FPs on their rosters is an indictment of medical schools and not of the specialty.

I'm sorry to hear that FPs are classified on a level below internists. I would refer Dr. Reppun to the article by Schroeder et al, *Annals of Internal Medicine* 104:554-561 and the accompanying editorials. A summary of the changes they propose for internal medicine training look vaguely familiar to the training that I received as a family practice resident. I hope that the internal medicine residencies don't take a big step backward.

In regard to restricted training, I don't think that there is a family practitioner around who claims to be an obstetrician or surgeon. By the way, at my residency, the family practice residents, not the Ob-Gyn residents, cared for and delivered the patients at the county prenatal clinic *and* the OB residents were glad that we did it.

I do not think that FPs claim to be the only portal of entry into the health-care system. The fact that HMOs give internists, pediatricians, and FPs the role of gatekeepers suggests that they believe that these specialties are able to deliver high quality, cost-effective primary care. Dr. Reppun is correct: Referral *is* the easiest thing in the world to do. *Good* referral is one of the hardest. Cost-effective, timely, and appropriate referral is one of the toughest jobs of the primary-care provider. With our wide-based training, FPs are well qualified for this job.

I would agree that all physicians should consider the patient's family. Dr. William Osler, the father of internal medicine, said, "It is not as important to know what disease the patient has as it is to know what patient has the disease." Knowing the patient's family is a very important step in knowing the patient.

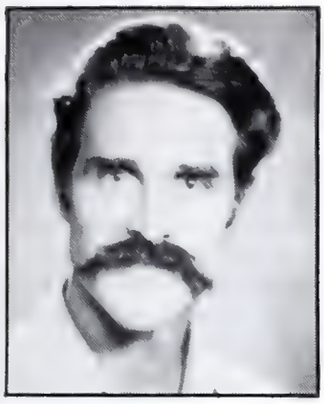
Randall M. Suzuka, MD
Haleiwa Family Health Center

The Editor responds:

Dr. Suzuka's comments are welcome. The editorial was meant to be more than somewhat provocative because despite being certified as specialists, board-certified Family Physicians neither get the consideration by third parties that allow FPs to charge and get higher fees than generalists nor are they, for the most part, granted hospital privileges commensurate with their excellent and long training in all fields of medicine — obstetrics, pediatrics and surgery. If any do get higher privileges, it is the result of fighting for them tooth-and-nail against those whose turf is threatened.

The other "thrust" of the editor's pen (wielded too much like a sword, intimates Suzuka!) was meant to take down these high-and-mighty FPs a peg for trying to impress on the gullible public that only an FP can and should claim the whole family as "his turf." The fact is, the current generation of savvy people perhaps all too often make their own diagnoses prior to choosing a specialist, which means the father goes to his choice, the mother to a "women's doctor," and the pediatricians have first dibs on the newborn in the nursery — and hang onto the kids until they are adults.

Finally, perhaps dedicated FP Randall Suzuka, MD, ABFP, did not quite get what the editorial intended to convey: That every physician, specialist or not, and every doctor's office should have a wide-open portal of primary entrance, and that every patient should be appraised as a whole person and not as a set of disconnected anatomical parts.



FROM THE DIRECTOR OF HEALTH

John C. Lewin, MD

Awakening to the Hepatitis B Challenge in America

Hepatitis B is an increasingly apparent and serious public health problem in America. Although the impact is far less visible than AIDS, the hepatitis B problem will similarly result in staggering financial and human suffering costs unless it becomes a more evident national public health priority immediately.

The disease is readily preventable in unexposed individuals by immunization. This is of particular importance in our maternal and infant populations, where neonatal HBV carrier status later results in high morbidity and mortality rates from primary hepatocellular carcinoma (PHC). In fact, PHC is known to develop in approximately 25% of neonates infected with hepatitis B and perhaps in even higher percentages of adult carriers. PHC can be detected early enough to be cured by surgical resection using serum alpha fetal protein (AFP) levels and, as indicated, liver scanning and/or ultrasonography. The extent to which PHC might recur in individuals cured via early detection and successful intervention is not yet known.

In Hawaii, where hepatitis B is rapidly increasing in prevalence in the general population due to exposure to high-incidence Asian and Pacific populations, the problem is akin to an epidemiologic volcano preparing to erupt. Of our general population, 4% are most likely *already carriers,* indicating that 1% of the population is at significant risk for development of PHC. If no immediate action is taken to screen and immunize the at-risk population — meaning infants and children, immigrants and refugees, contacts to positives, health-care and special-education employees, gays and bisexuals, and iv-drug users — then the incidence will rapidly increase in the general population. Hepatitis B is estimated to be 30 times more infectious than AIDS by similar epidemiologic routes. Thus, Hawaii's present situation portends the development of problems similar to the dimensions manifest throughout the United States.

The problem of vaccine costs in the United States contributes greatly to the apparent apathy of national health policy makers to take immediate action against hepatitis B. The required three doses of synthetic vaccine cost $60 for children and $120 for adults in the United States. In Europe and Asia, the vaccine now costs between $3 and $6 for the same three-dose immunization. Although the cost of the vaccine will likely drop radically in the U.S. within a few years, "the band is playing on."

A policy of active and aggressive screening and vaccination simply *must* be undertaken across our nation. The target populations most likely to benefit will be infants and women in childbearing ages — in addition, of course, to the traditional high-risk groups. While the problem in Hawaii and the Pacific Basin represents a genuine public health emergency, it is imperative that the whole nation respond in a coordinated way. Hawaii must work with the higher-incidence areas of the Pacific in order to deal effectively with the risk to ourselves of increasing carrier prevalence. The article by Drs. Ikahihifo, Bender, et al, regarding hepatitis in Marshallese women, reveals the present difficulties that we face in the Pacific Basin.

We must keep in mind that our foremost concern about hepatitis B relates to the risk of subsequent PHC. Therefore, while screening programs must be instituted for potential and expectant mothers, infants, and high-risk groups, we must not fail to provide adequate monitoring of carriers of HBV. Blood screening is performed routinely in the United States prior to immunization because this method is less expensive than immunizing entire populations at present high vaccine costs. However, we cannot afford to abandon blood screening of populations as immunization costs drop. If we do so, we will no longer know who are the carriers and for whom our long-term monitoring for early detection of PHC will be necessary.

For the moment, let us work closely together to enlighten national and local leaders regarding the importance of hepatitis B prevention programs and priorities; let us develop monitoring programs for PHC in those who are carriers of the disease; and let us endeavor to urge either significantly reduced vaccine costs in the United States or increased federal subsidies for vaccines at present costs, so that we can begin these processes immediately. The short-sighted philosophy of merely deferring action on the basis of financial considerations will have tragic consequences later on in terms of *both* human suffering and medical care costs.

In summary, hepatitis B, a readily preventable disease in the unexposed, is a significant and underestimated threat to the health of society. Immediate, coordinated, public health efforts are urgently needed to prevent morbidity, mortality and the expense of long-term medical care that could conceivably parallel the costs and consequences of AIDS.

Elevated Cholesterol: Fact or Fancy?

Paul Y. Tamura, MD*

According to two of the latest national surveys conducted by the National Institutes of Health, the number of physicians who believe that lowering elevated blood cholesterol reduces coronary heart disease increased from 64% in 1983 to 87% in 1986.[13] *This in spite of the fact that problems with serum cholesterol determinations still exist. What is a normal or an elevated value? Are the results now dependable? What about misidentification of specimens, or chance errors, 1 in 19?*

Introduction

In actuality, spurious and misleading results do occur. Not all are due to technical errors; they may be inherent in the procedure. Furthermore, all elevated values are not spurious, and many of these do not indicate cardiac risk. The fact of the matter is that none of the above should negate the value of the procedure. Cholesterol determination is still an excellent and inexpensive screening measure. Of course, all abnormal results should be confirmed. Those patients with persistently elevated values should be further investigated clinically, as well as by a review of other lipid parameters.

Worthy of comment are questions regarding what are normal and elevated values.

When it comes to cholesterol, we cannot determine what a normal range is simply by mathematical calculations based on cholesterol determinations of the population at large. We must establish a range based on young people (boys and girls), assuming that these subjects are free of coronary artery disease. An attempt to accomplish this with 15-year-olds in a preliminary study was disturbing. Those in the 68 percentile range went as high as 202 mgm/dl and at the 96 percentile level, 228 mg/dl! These levels cannot be used as a "target" for all people to strive for. To increase the sensitivity of a cholesterol test, it appears that the upper level for all age groups may need to be lowered to 190mg/dl.

The study on these young subjects suggests dietary indiscretion. Even at this age, those with higher ranges gave evidence of increased cardiac risk when we studied the Apolipoproteins A-1 and B. There was also a suggestion of a hereditary tendency toward abnormal lipid metabolism in several children with elevated cholesterol values. Thus, identifying individuals, particularly the young, who may be at risk seems to be a very worthwhile endeavor. For them, education regarding the various risk factors that include diet, smoking, stress, hypertension and diabetes — to name a few — may well prolong the lives of many. This endeavor must start early in life, before the damage begins.

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Cholesterol Screening

Cholesterol has long been established as the major constituent of advanced atheromatous lesions filled with yellowish, gruel-like material ("atheroma" is derived from the Greek word *athere* meaning gruel).[1,2,3,4,5,6] The Framingham, Mass., studies[7] proposed that the determination of serum-cholesterol was as good an index of coronary atherosclerotic risk as any other lipid determination, including lipoprotein. With elevated values of cholesterol, 260 mg/dl or more, they found that the risk of this disease was sixfold in men.[7,8,9,10,11,12] High cholesterol values also increase the risk in women, but generally at an older age.[9,10]

While the use of cholesterol measurement in the serum has been widely used, two national surveys indicated that in 1983, only 64% of the physicians felt that therapy to lower blood cholesterol levels reduced coronary heart disease.[13] However, clinicians who follow the levels of serum-cholesterol serially, either fasting or nonfasting, in their patients, have been troubled or frustrated by fluctuating, inconsistent values. The criticisms leveled against the laboratories by clinicians have often been harsh, but not without justification.

Clinical pathologists are faced with a twofold problem. Firstly, are cholesterol values in fact inconsistent and incorrect? Secondly, is it possible that the cholesterol values, as generally determined today, vary in a given patient over a relatively short period of time, without therapy or as the result of some drastic physical or dietary change? Of the two, most physicians are inclined to accept the former because of the general impression that the cholesterol values should be fairly consistent in a given patient, whether fasting or not.

As for the first question, a long list of potential sources of errors come to mind, such as poor technique, inferior methodology, non-standard reagents and instrumentation, to name a few. The chemical method is superior if the complete and tedious extraction procedure is followed. However, with the growing demand for the test, it became necessary to modify the procedure. This was not without some compromise in accuracy, however. In addition, many interfering substances add to the inconsistency and lack of precision. Even good instrumentation could not overcome the problems.

When the enzymatic method of testing was developed, automation with precision, speed and small sample size became possible. The procedure was hailed as being practical, cost-effective, and it agreed with reference values. However, the procedure is not as specific as expected since sterols other than cholesterol are also measured. Furthermore, interfering substances can again affect the results but to a lesser degree than with the chemical method.

The solution to this problem is to repeat the study. Better yet, use the cholesterol level as a screening tool to be followed by a more detailed history (with emphasis on family history) and clinical examination, together with a review of other lipid parameters.

These other lipid parameters include the study of the lipoproteins, the high-density lipoprotein (HDL) and the low-density lipoprotein (LDL).[7] HDL has long been proposed as a better indicator of coronary atherosclerotic risk.[14] LDL, on the other hand, is now coming more and more into the limelight because of its role in the metabolic process.[1,21] Futhermore, it is believed that elevated LDL can cause vascular intimal damage and promote proliferation of smooth cells.[1,21]

The Apolipoproteins Al and B (neither Apo Al nor Apo B represent homogeneous lipid fractions) have relatively recently been proposed as an excellent tool for evaluating cardiac risk.[15,16,17] The Apo Al is rich in HLD, and the B fraction is not. There is apparently a hereditary tendency for the B fraction to be elevated in children of parents with coronary heart disease.[17]

Regarding the second question: Can individual cholesterol values fluctuate? We do see this in some patients. At the present time, we do not know the reason the fluctuation occurs. We did serial studies on five people, four women and one man. Three women (and the controls) had consistent values, while in one woman and the man, tests fluctuated significantly. Neither of the latter were on any specific therapy nor had they made any significant changes in their diets. We believe the nonfasting state can alter the result in some cases, perhaps due, in part, to turbidity of the serum. It is obvious that further studies with a larger number of patients, together with other lipid parameters, need to be done.

The Experiment

We performed cholesterol determinations (enzymatic method) on 96 15-year-old students. Thirty-five were girls and 61 were boys. The values ranged from 123 mg/dl to 294 mg/dl. The mean was 176 mg/dl and the median was 174 mg/dl. The 68 percentile range based on 1 Standard Deviation (1 SD = 26 mg/dl) was 150 mg/dl to 202 mg/dl. The 96 percentile (2 SD) range was 124 mg/dl to 228 mg/dl. The upper range for this age group is high. Four boys' values were in the range of 190 to 199 mg/dl, three of whom had elevated Apo B, and two of these had a borderline cardiac risk ratio of 1.3. Of particular interest were three girls in this category, one of whom had a borderline cardiac risk with an Apo A1:B ratio of 1.3.

There were nine boys with cholesterol levels greater than 200 mg/dl. Of these, one was a borderline cardiac risk and two were definite cardiac risks. These two had cholesterol levels of 253 mg/dl and 294 mg/dl, respectively. At the same time, their Apo B levels were elevated.

To our surprise, there were 10 girls with cholesterol levels above 200 mg/dl. Three showed Apo B levels that we believe are high, and three had Apo Al:B ratios of 1.4, 1.4 and 1.5, respectively. One girl had an elevated Apo B level with Al:B ratio of 1.2. The highest cholesterol in a girl was 260 mg/dl.

(Continued on next page)



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3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene)

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WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

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Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

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Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.

2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml

3. Correction of acidosis, if present, with intravenous sodium bicarbonate.

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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However, she had a markedly elevated Apo Al level; with an average Apo B, her ratio was an excellent 2.8.

Conclusion

From this study, it appears that helpful information regarding cardiac risk can be obtained from cholesterol determinations by the age of 15 years in both boys and girls. All subjects with Apo Al:B ratios of 1.3 or less had cholesterol levels 193 mg/dl or higher. The very high values, i.e., greater than 250 mg/dl, with one exception, showed abnormal Apo Al:B ratios. Many with elevated cholesterol values were not considered cardiac risk based on other lipid studies. Thus, HDL, LDL, Apo Al and B studies are indicated together with a clinical follow-up of the "abnormal" individual, and if indicated, other members of the family as well.

The upper levels of normal cholesterol generally found in this age group, based on this study, appear to be high. This, in turn, may mean that upper limits for the adult population (215 mg/dl) should also be lowered to improve the sensitivity of this test.

Intimal deposition of lipids is visible even in newborns as "fatty streaks."[18] The fatty streaks are followed by proliferative changes.[19] Hirsch and Weinhause[3] demonstrated the similarity of the intimal lipids to that in the plasma, implicating the blood as the source of the deposits. In the early phases, and *only* then, before proliferative and degenerative changes occur, is the atherosclerosis reversible. In the two national surveys mentioned above, 87% of the physicians in 1986 believed that therapy to reduce cholesterol will reduce coronary cardiac risk.[13] The question is: Is there now enough evidence to convince every physician to become serious about the importance of the dietary intake of cholesterol-rich foods in relation to cardiac risk?[1,7,14]

For the young who look upon coronary heart disease as a disease of old people, the findings in young soldiers during the Korean War reported 35 years ago should be restated. Enos et al found 77.3% of young soldiers with an average age of 22 had significant coronary artery disease.[20]

We have examined the coronaries of young local individuals who suffered accidental deaths. In about one-half of the males at the age of 20, very early intimal proliferative changes were visualized microscopically. The findings were not as striking as those noted in the young soldiers, but the fact is the disease can and does start in very young adults.[20,21,22]

In the instance of adults who have a fatalistic attitude toward it, an effort should be made to make them realize that coronary atherosclerosis is an episodic, continuing process and not necessarily irreversible.

ACKNOWLEDGMENT

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REFERENCES

1. Marks JL: Atherosclerosis: The cholesterol connection. *Science:* 194 12 Nov. 1976.
2. Anitschkow N: Uber die Veranderungen der Kaninchenaorta bei experimentellen Cholesterinsteatose. *Beitr Path Anat* 56:379, 1913. Quoted by Malmros, H: Controversy in Internal Medicine II. Page 218. W.B. Saunders Co. Phila., 1974.
3. Hirsch EF and Weinhouse S: The role of lipids in atherosclerosis. *Physiol Rev* 23:185-202, 1943.
4. Malmros H: Controversy in Internal Medicine II, W.B. Saunders Co., Phila. 1974 Page 217-227.



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Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections.

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION)

PRECAUTIONS

General:

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

Drug Interactions:

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C:

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS)

Nursing Mothers

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS)

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%)

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%)

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

5. Duguid JB: Pathogenesis of arteriosclerosis. *Lancet* 2:925-927, 1949.
6. Ross R and Glomset JA: Pathogenesis of arteriosclerosis. (Second of two Parts) *N Engl J Med* 295:420-425, 1976.
7. Kannel WB, et al: Risk factors in coronary heart disease: An evaluation of several serum lipids as predictors of coronary heart disease: The Framingham study. *Ann Int Med* 61:888, 1964.
8. Dawber TR and Kannel WB: Susceptibility to coronary heart disease. *Mod Concepts Cardiovasc Dis* 30:671, 1961.
9. Doyle JT et al: A prospective study of degenerative cardiovascular disease in Albany: Report of three years' experience. I. Ischemic heart disease. *Am J Pub Health* (Part 2) 47:25, 1957.
10. Paul O, et al: A longitudinal study of coronary heart disease. *Circulation* 28:20, 1963.
11. Keys A, et al: Coronary heart disease among Minnesota business and professional men followed fifteen years. *Circulation* 28:381, 1963.
12. Keys A: Coronary heart disease in seven countries. American Heart Association, Monograph No. 12, 1970.
13. Schucker B, et al: Changes in physician perspective on cholesterol and heart disease. Results from two national surveys. *JAMA* 258:3521-3536, December 25, 1987.
14. Bates HM: HDL-cholesterol and coronary heart disease. Laboratory Management Pages 20-21 Feb 1978.
15. Naito HK: The clinical significance of apolipoprotein measurements. *J Clin Immunoassay* 9:11, 1986.
16. Maciejko JJ et al: Apolipoprotein A-1 as a marker of angiographically assessed coronary-artery disease. *N Engl J Med* 389:385-389, 1983.
17. Freed DS, et al: The relation of apolipoproteins A-1 and B in children to parental myocardial infarction. *N Engl J Med* 315:12, 1986.
18. Faggiotto A and Ross R: Studies of hypercholesterolemia in the non-human primate. I. Changes that lead to fatty streak formation. *Arteriosclerosis* 4:323-340, 1984.
19. Faggiotto A and Ross R: Studies of hypercholesterolemia in the nons human primate. II. Fatty streak conversion to fibrous plaque. *Arteriosclerosis* 4:341-356, 1980.
20. Enos WF, et al: Coronary atherosclerosis in soldiers. *JAMA* 152:1090-1093, 1953.
21. Ross R: Medical Progress. The pathogenesis of atherosclerosis — an update. *N Engl J Med* 314:488-500, Feb 20, 1986.
22. Stary HC: Evolution of atherosclerotic plaques in the coronary artieries of young adults. *Arteriosclerosis* 3:471, 1983.

. . . there are risks in all therapies

HTLV-1 Seroconversion in a 56-year-old Japanese Woman Undergoing Chemotherapy for Acute Nonlymphocytic Leukemia

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Denny Kwock
Jason Kimata
Steven Kaneshiro
Scott Nakamura
Eugene Yanagihara, MD

HTLV-I is a retrovirus found to be endemic in the Southeastern United States, Southern Japan, Africa, and Hawaii. Transmission of the virus is vertical (from mother to child) and horizontal (blood products, shared needles, sexual contact, and possibly insect borne). It is believed to be responsible for ATL (Adult T-Cell Leukemia/Lymphoma), myelopathies, and tropical spastic paraparesis.

The presence of antibody to HTLV-I, as with the other human retroviruses, is thought to indicate prior exposure to the virus, as well as a latent infection. We report the first case in Hawaii of serologic conversion to this virus during therapy for acute nonlymphocytic leukemia (ANLL) with no obvious source other than blood transfusions.

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Case Report

A 56-year-old married, Tokyo-born Japanese woman presented in April 1985 with a persistent flu-like illness of 2½ months' duration, with complaints of generalized weakness and malaise together with fever, early-morning chills, nausea, headache, and anorexia. She had noticed she bruised easily along with an eight-pound weight loss. There was no history of transfusions or of familial hematologic diseases.

Physical examination disclosed a middle-aged woman who appeared fatigued and chronically ill. Oral temperature was 38.5°C. BP was 116/68 with a pulse rate of 104. Respirations were not labored. There was a tender 3 cm right anterior cervical

node without other generalized adenopathy. The lungs were clear and the cardiac exam was remarkable only for the presence of a soft systolic ejection murmur. The liver was percussed as having a total span of 9 cm, and no spleen was felt. Several ecchymoses were seen over the extremities, though no rash or other lesions were found.

CBC revealed a hemoglobin of 7.6 gm and a WBC of 4,300. The smear showed 52 blasts, 6 promyeloblasts, 1 band, 6 segs, 1 mono., and 3 eos. There were 43 nucleated RBC/100 WBC. The platelet count was 275,000. PT; PTT and the chemistry exam were within normal limits. Chest X-ray showed no infiltrates or osseous lesions.

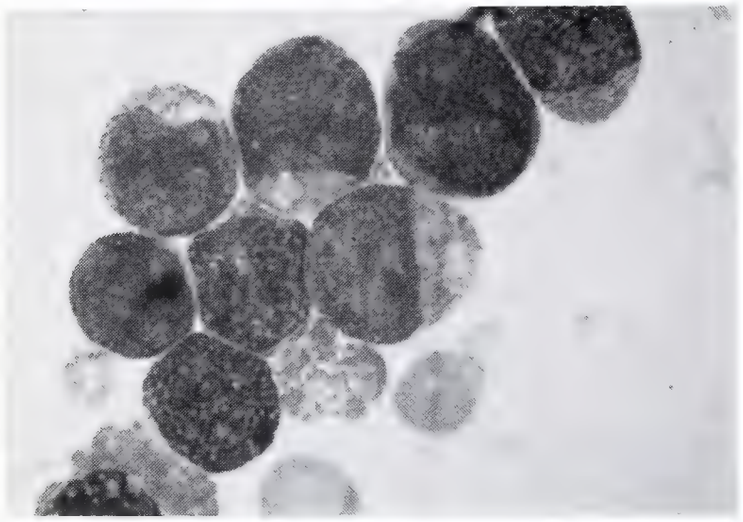


Figure 1: Bone marrow aspirate demonstrating acute myelomonocytic leukemia.

Bone marrow aspiration demonstrated acute myelomonocytic leukemia, FAB-M4 (Fig. 1). Peroxidase, esterase, and Sudan black stains were positive, confirming ANLL.

HTLV-I antibody was negative by Western Blot. The patient was successfully induced and consolidated with chemotherapy between April and June 1985, obtaining a stable complete remission. During the chemotherapy she received 20 units of packed red cells and 93 units of platelet concentrate. She remains in remission at this time.

Repeat Western Blot studies on June 5 and 19 and on July 3, 1986, have been persistently positive (Fig. 2). Her husband is serologically negative on both ELISA and Western Blot. She has no clinical or morphologic data to suggest the development of ATL.

Her clinical course has been notable for the development of non-A-non-B hepatitis. The relationship of the hepatitis to HTLV-I viral infection is not known nor established.

Materials and Methods

Two assays were used in this study: the ELISA and Western Blot techniques. The Western Blot assay was utilized to confirm the ELISA results.

ELISA Assay

ELISA assays for HTLV-I antibodies were performed using HTLV-ELISA kits (DuPont, Cat. No. NEA-9852, Mfg. by Biotech Research Laboratories, Inc., Lot #023 and #027). Washes consisted of Dulbecco's Phosphate Buffered Saline containing 0.05% Tween-20. Twenty percent heat-inactivated defined fetal bovine serum (FBS) in wash solution served as the required sample serum diluent. All reagents were prepared and stored at 2°-3°C until the assays were performed at room temperature, 28°C. Results were scored on a Uniskan 96-well spectrophotometer.

For the ELISA assays, 200ul of serum diluent were added to each well of a 96-well plate (with inactivated HTLV-1 bound to the bottom of each well). 10ul of donor plasma or serum were added to duplicate wells. The positive and negative controls were added to 3 wells each. After a 1-hour incubation, the wells were washed 5 times with PBS Tween-20. 100ul of diluted alkaline phosphatase conjugate were then added to each well for 1 hour and followed by 5 washes with PBS Tween-20. 200ul diethanolamine (DEA) substrate buffer were added to the wells for 20 minutes. The reaction was stopped with 50ul of NaOH. Absorbance readings were made at 405nm (see Fig. 1).

The baseline was calculated by averaging the 3 positive control readings and dividing the average by 2. Any sample reading above the baseline value was considered positive to HTLV-I.

Western Blot

The Western Blot assays were performed using the Western Blot Test kit for the Detection of Antibodies to HTLV-I (Biotech Research Laboratories, Inc. Lot #1008, note: new kit, no. Cat). The kits provided electrophorised (PAGE SDS) HTLV-I antigens (p19 and p24) immobilized on nitrocellulose strips and the appropriate reagents. Tests were run at room temperature, 28°C.

In each of 27 wells, a test strip was placed and 2 ml of wash buffer were added. After a 30-minute incubation, the buffer was aspirated and 2 ml of blotting buffer were added to each well. The wells were placed on an orbital rocker for 5 minutes at 600 rpm. Next to each of the first 25 strip wells, 20ul donor plasma (or serum) were added and to wells 26 and 27, positive and negative controls were added, respectively. The samples were allowed to incubate for at least 8 hours.

After the incubation, the blotting buffer was aspirated and the strips were washed 3 times with the wash buffer at 5-minute intervals. 2 ml of conjugate #1 were added to each well and allowed to incubate for 60 minutes on the orbital rocker; 3 washes followed this procedure. A second conjugate was added and allowed to incubate for 60 minutes on the orbital rocker. This incubation was also followed by 3 washes. Finally, 2 ml of 1:1 mixture of substrates A and B were added to each strip well until the background developed. At this point, the reaction was stopped with reagent grade water. The results were photographed (Fig. 2).

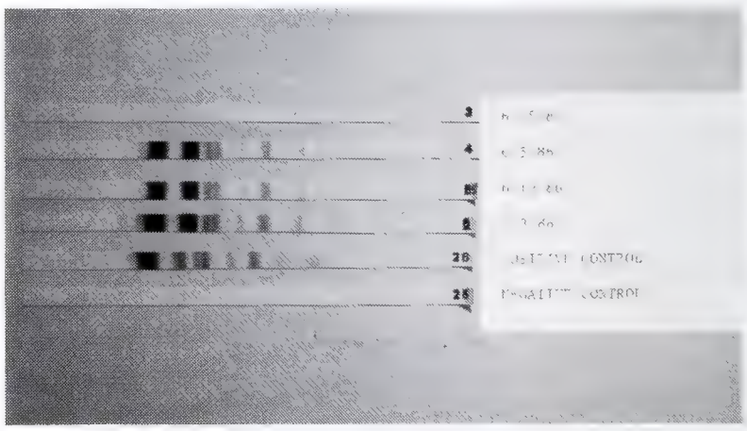


Figure 2: Western Blot results demonstrating seroconversion of patient from 6/25/85 to 6/5/86. The patient remains seropositive in subsequent tests on 6/19/86 and 7/3/86.

Discussion

HTLV-I is a unique type-C human retrovirus[1] identified as the infective cause of the Adult T-Cell Leukemia/Lymphoma Syn-

(Continued on page 273)

MRI CASE OF THE MONTH

AVASCULAR NECROSIS

Clinical Information: The patient is a 39-year-old male with a history of barotrauma and recent hip pain.

Figure A

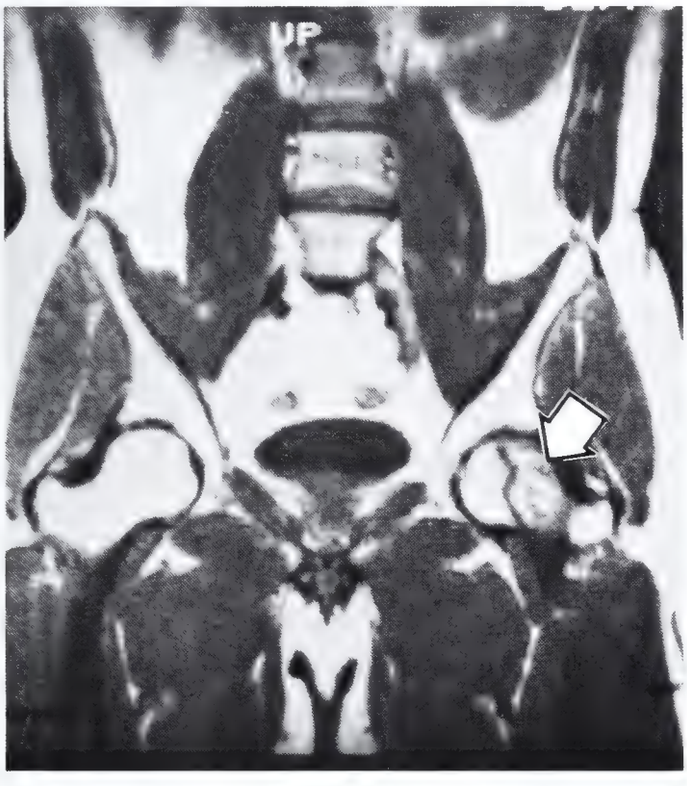


Figure B



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: T1-weighted coronal images of the pelvis and hips show that the normal fatty marrow in the femoral neck and shaft is clearly demonstrated on the right side. On the left side, there is an area of infarction with loss of the normal "fat" signal, indicative of avascular necrosis. Contiguous images in the coronal plane clearly demonstrate the extent of disease in this patient's proximal left femur.

Magnetic Resonance Imaging
Center of the Pacific

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drome (ATL),[2] which often results in a highly lethal and aggressive course despite intense chemotherapy.[3] It is theoretically an unlikely cause of ANLL since it is specifically trophic to mature T-lymphocytes.[4]

High incidences of antibody positivity to HTLV-I occur in ATL endemic areas, as well as in populations of migrants from these areas.[6] Current data indicate that a significant percentage of HTLV-I seroconvertors have persistent infection as evidenced by recovery of the viral genome from peripheral lymphocytes.[7]

HTLV-I retroviral transmission is both horizontal and vertical. The viral genome can be isolated from blood, especially lymphocytes.[5] Fresh human milk has also been found to contain HTLV-I virus. Thus, transmission venereally, by blood transfusion, or perhaps by tattooing may occur. In addition, maternal-to-child transmission also occurs.

It is likely that the cause of this patient's seroconversion was infection from one or more HTLV-I positive blood products. It is possible, though less likely, that seroconversion could represent unmasking of a dormant infection by immunosuppressive chemotherapy. This is unlikely, because anti-HTLV-I IgG would be expected to persist indefinitely.

The prevalence of HTLV-I infection in Hawaii is not established. It is reasonable to speculate that the virus traveled to Hawaii along with its Southern Japanese hosts. A percentage of this population would be expected to demonstrate viral exposure. Counterparts in Japan who migrated to non-HTLV-I endemic areas within Japan itself have been shown to demonstrate viral exposure, and are indeed also carriers.

The significance, with regard to excess morbidity, of HTLV-I seroconversion is not well known, probably because of the long incubation and latency times associated with asymptomatic carriage. There is a low incidence, to date, of ATL in HTLV-I seropositive adult,[7] but the association of HTLV-I and ATL is unequivocal. The risk of development of ATL is estimated at 1/100 over the lifetime of the patient.

Happily, there is no report of ATL in seroconverted recipients of blood products.[7] However, HTLV-I is clearly transmissible through blood products and can lead unequivocally to chronic infection by the retrovirus. Counseling of such patients will remain problematic until long-term data are gathered documenting the lifetime risk of ATL this patient and those like her must face.

This virus is in many ways less virulent and infectious than the HIV virus, especially by sexual contact. The testing of blood for the presence of HTLV-I antibody positive blood will be important for the prevention of spread of this virus.

It is still early in the natural history of this viral infection. Prevention of this infection is possible with an aggressive screening program at the blood bank, which has been instituted. One is more sanguine about the possibility of containment of this virus than with the HIV virus.

REFERENCES

1. Guroff R and Gallo: Establishment of an Etiologic Relationship Between the Human T-Cell Leukemia/Lymphoma Virus (HTLV) and Adult T-Cell Leukemia. *Blut:* 47, 1-12, 1983.
2. Reitz et al: Human T-Cell Leukemia/Lymphoma Virus: The Retrovirus of Adult T-Cell Leukemia/Lymphoma. *J Infectious Diseases:* 147, 399-405, 1983.
3. Bonn et al: Clinical Course of Retrovirus-Associated Adult T-Cell Lymphoma in the United States. *NEJM:* 309, 257-264, 1983.
4. Blattner et al: Human T-Cell Leukemia/Lymphoma virus and Adult T-Cell Leukemia. *JAMA:* 250, 1074-1081, 1983.
5. Kinoshita et al: Oral Infection of a Common Marmoset with Human T-Cell Leukemia Virus Type-I (HTLV-I) by Inoculating Fresh Human Milk of HTLV-I Carrier Mothers. *Jpn J Cancer Res:* 76, 1147-1153, 1985.
6. Tajima et al: HTVL-I Carriers Among Migrants from an ATL-Endemic Area at ATL Non-Endemic Metropolitan Areas in Japan. *Int J Cancer:* 37, 383-387, 1986.
7. Sato and Okochi: Transmission of Human T-Cell Leukemia Virus (HTLV-I) by Blood Transfusion: Demonstration of Proviral DNA in Recipients' Blood Lymphocytes. *Int J Cancer:* (1986) 37, 395-400, 1986.

REPORT FROM HMA MEMBER

(Continued from page 261)

needles, ventilators (I saw only one Bird ventilator in several pieces in the Intensive Care Unit at Manolo Morales, none in use), and acute and chronic peritoneal dialysis catheters. The one hemodialysis machine in Lenin-Fonseca Hospital was inoperative due to a faulty conductance meter that they were unable to fix or replace. Medicines are very difficult to obtain both in hospitals and as outpatients. Most of the medicines they do have are antiquated, which bothered the physicians, many of whom are well trained (i.e. kanamycin and chloramphenicol are still popular antibiotics, and reserpine and aldomet continue to be the main antihypertensives). These gross deficiencies, I am certain, merely scratch the surface of the problem.

Another problem is the inability to pay a living wage to hospital employees. For instance, a janitor makes about $10 a month, while a physician makes $80 a month. This makes it very difficult to maintain cleanliness in the hospitals, let alone adequate doctoring, since all of the physicians must have private practices.

The main sources of these problems are the contra war and the U.S. economic blockade and sanctions. The contra war has nearly bankrupted the economy to the point where there is very little money left over for any other governmental activities. Until the war is over, and all of the cachorros can go back to the countryside, there will be no money left for the medical system of Nicaragua.

The ongoing economic embargo on this small, underdeveloped country has taken a great toll also. Much of their medical equipment, such as it is, is American, and when the machines break, there is no way that companies can ship them parts. I saw several old, but potentially serviceable machines that were tragically inoperative due to lack of parts or technical know-how needed to repair them.

On the basis of what I have seen, I feel that American physicians should be in the forefront of the effort to stop the contra war and end the economic blockade. There are people suffering and dying needlessly every day, of maladies that could be treated by their physicians with a minimum of medicine and basic equipment that would become available if peace and trade normalization were to occur. I would encourage doubting physicians to spend a week there to see for themselves the conditions, and then let their elected officials hear from them.

(Dr. Moser is an internist and nephrologist on Maui. He was chosen by HMA in 1985 as Hawaii's Physician of the Year.—Ed.)

Osseointegrated Jawbone Implants for Permanent Dental and Maxillofacial Reconstruction

George A. Wessberg, DDS*
Ernest W. Scheerer, DDS**
Bruno West, DDS**
Stephen Parel, DDS, MS***

The biological phenomenon of "osseointegration" was discovered by P-I Branemark, MD, PhD, in Sweden three decades ago and currently sets the stage for the advent of true bionic limbs and organs. The first clinical applications of this direct fusion of pure titanium and vital bone was initiated 20 years ago with the fabrication of permanent dentures for edentulous humans. Longitudinal studies of 410 jaws including 2,768 implants demonstrated a 91% success rate in the mandible and 81% success in the maxilla after 15 years of continuing masticatory function. Our success with the placement of more than 450 fixtures (implants) in the past three years parallels these results. Clinical examples of various applications are presented to illustrate this treatment modality.

Introduction

There are more than 10 million Americans who no longer have any of their natural teeth. Many of these unfortunate individuals are "dental cripples" because they are handicapped by dentures that cause pain when chewing, or their false teeth are too loose to masticate food properly. Loss of teeth leads to poor mastication, malnutrition, altered speech and socially unacceptable appearance.

Numerous oral surgical procedures have been attempted with limited success and considerable morbidity for many of these geriatric patients. Skin grafting and bone grafting procedures were the most popular, but any improvement in function was usually temporary due to natural resorption of the jawbones. Hence, the risks eventually exceed the potential benefits.

Professor Per-Ingver Branemark, MD, PhD, director of Laboratory of Experimental Biology at the Department of Anatomy, University of Goteborg and Institute for Applied Biotechnology, in Goteborg, Sweden, discovered a unique biological phenomenon while studying the effects of temperature changes on capillaries within medullary bone in the femur of rabbits.[1] He termed this phenomenon "osseointegration."

Branemark defines osseointegration as a firm, direct and lasting connection between vital bone and screw-shaped titanium implants of defined finish and geometry.[2] There is no interposed tissue between the inert metal and bone. Osseointegration can only be achieved and maintained by a gentle surgical technique, avoidance of functional loading during healing, and proper distribution of stress during function (Fig. 1).

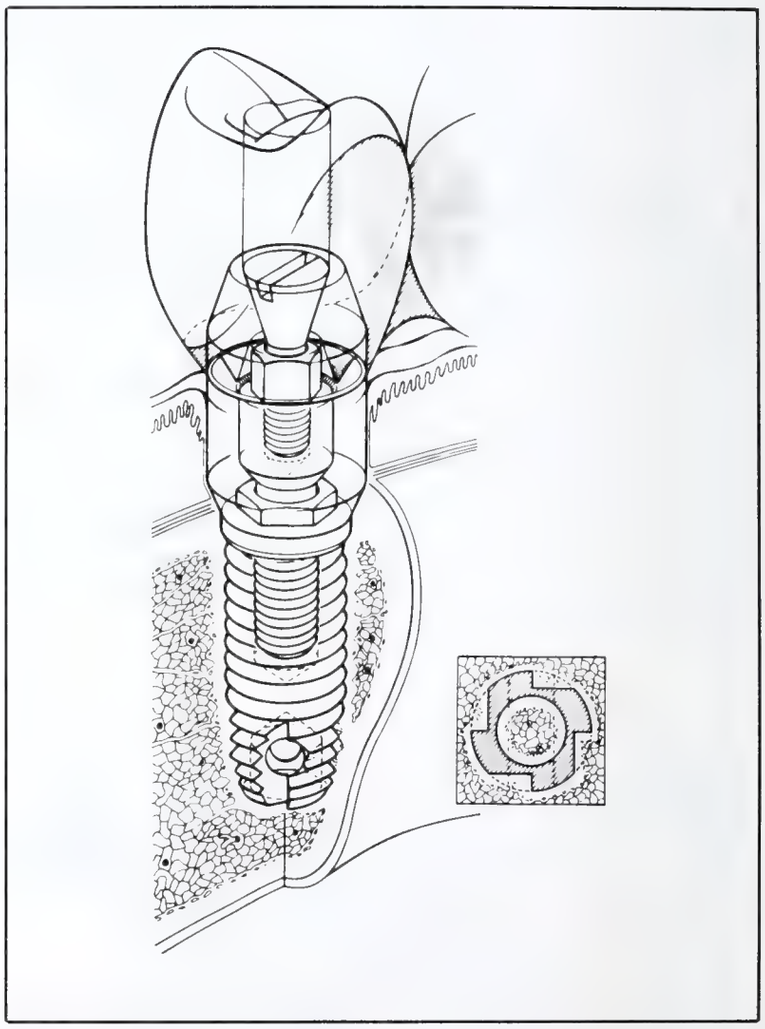


Figure 1: Schematic of osseointegration.

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Adell, Lekholm, Rockler and Branemark reported a 15-year longitudinal study (1965-1980) of 2,768 fixtures (implants) installed in 410 edentulous jaws of 371 consecutive patients for dental reconstruction with fixed bridges. Critical evaluation of 130 jaws with 895 fixtures that had been under continuous function for five to nine years demonstrated retention of 91% of mandibular fixtures and 81% of maxillary fixtures. Furthermore, 100% of mandibular bridges and 91% of maxillary bridges were continously stable. (Fig. 2).[3]

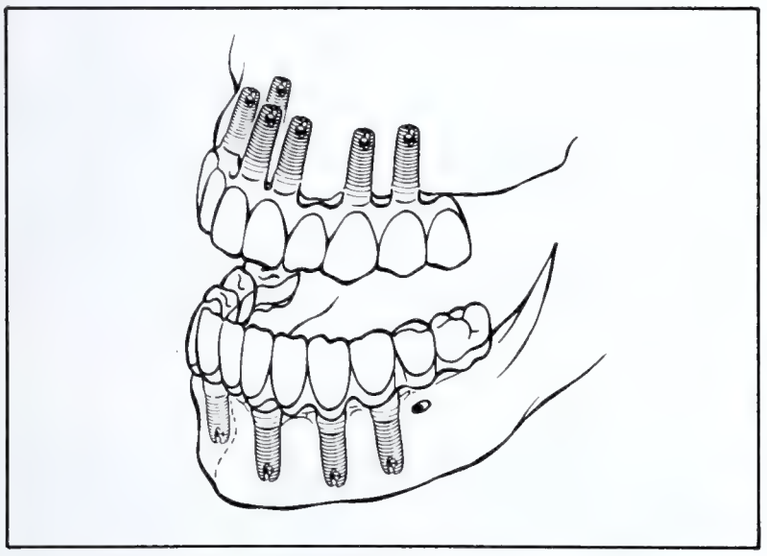


Figure 2: Biotes jawbone reconstruction.

The surgical procedure emphasizes minimal mechanical or thermal trauma to the patient's tissues. Successful osseointegration depends upon sterility and precision. Low drill speed and copious irrigation enables the oral surgeon to place fixtures without heating surrounding bone above the critical temperature of 47°C.

This method preserves the optimum number of viable osteogenic cells at the interface with the titanium fixture. Procedures are performed routinely in the office under local anesthesia. Surgical time varies from 30 to 120 minutes. Patients are dismissed with little or no discomfort or edema. They may insert their maxillary or mandibular denture immediately for aesthetic purposes.

The patient eats a very soft diet with the old dentures in place for a healing period of three to nine months. A minor secondary surgical procedure is then performed to expose the integrated fixtures and fasten the abutment cylinders that protrude through the oral mucosa and provide the foundation for the dental bridge.

The dental reconstruction is complex and must distribute masticatory forces appropriately in order to prevent subsequent failure of one or more fixtures. The fabrication of maxillary bridges is much more complicated than mandibular prostheses, due to considerations of speech and aesthetics.

Clinical Applications

There are at least 50 dentists in Hawaii who have been specially trained to provide the Branemark System-Nobelpharma's Tissue Integrated Prosthesis for patients. The authors of this article have been using this system since 1984. The senior author, Wessberg, has placed more than 450 osseointegration fixtures to date.

The Nobelpharma System was initially intended for the dental rehabilitation of completely edentulous jawbones. However, several modifications have been introduced in order to permit restoration of partially edentulous jaws and even one missing tooth. This permits dentists to eliminate removable partial dentures that "snap" onto existing teeth and avoid unnecessary crowns on healthy teeth to "bridge" a space caused by one or a few missing teeth.

● **Complete Fixed Bridge.** The rehabilitation of the completely edentulous jawbone is achieved by placing four to six fixtures to support a 12-tooth bridge. (Fig. 3A-C). The patient cannot remove this type of bridge. Patients with these bridges eat everything very easily, speak with confidence, and brush the components just as if they were "real teeth." Although the superstructure looks less than natural when the lips are retracted, the aesthetics are quite pleasing when the patient is viewed during normal lip posture.

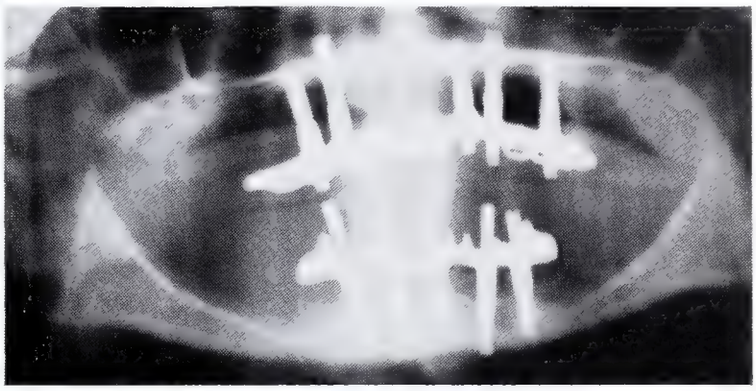


Figure 3A: Panorex with five fixtures in severely atrophic mandible and five fixtures in maxilla.



Figure 3B: Intraoral view of fixed bridge.



Figure 3C: Natural appearance with normal lip posture.

(Continued)



Figure 4A: Intraoral view of framework for maxillary overdenture.

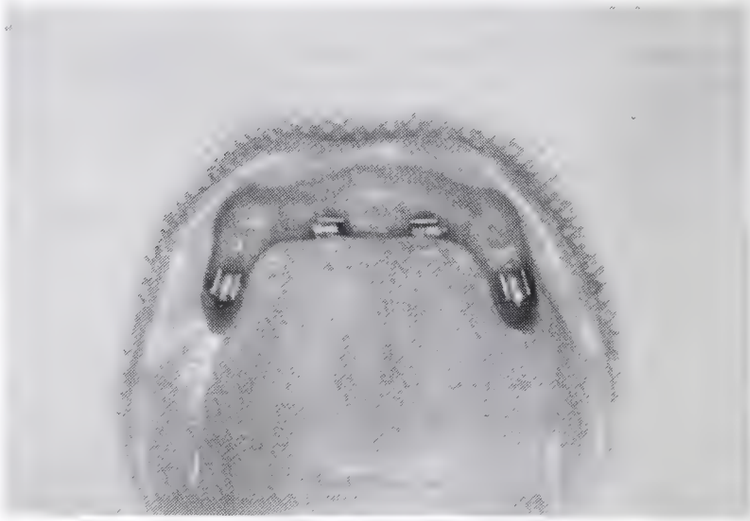


Figure 4B: Inside of overdenture.

● **Complete Removable Denture.** Some patients select a removable "overdenture" that attaches to a fixed substructure retained by osseointegrated implants. (Fig. 4A-B). Primary reasons for selecting an overdenture are aesthetics, speech or economic factors. Fortunately, the patient can always elect to convert the system to a complete fixed prosthesis at a future date.

● **Segmental Fixed Bridge.** The most popular use of this system is the replacement of a few teeth to avoid the use of a removable partial denture. The placement of one or two implants is often all that is necessary to permit dental reconstruction with fixed crowns and bridges (Fig. 5A-C). Although the posterior segments of the lower jaw are the most common areas, these implants can be placed in the maxilla when there is adequate bone below the antrum.

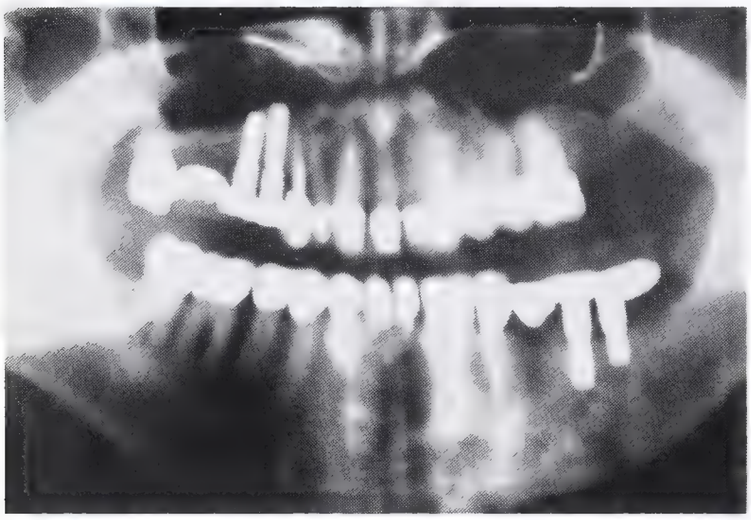


Figure 5A: Panorex with four fixtures for maxillary and mandibular bridges.



Figure 5B: Intraoral view of fixed bridge right maxilla.

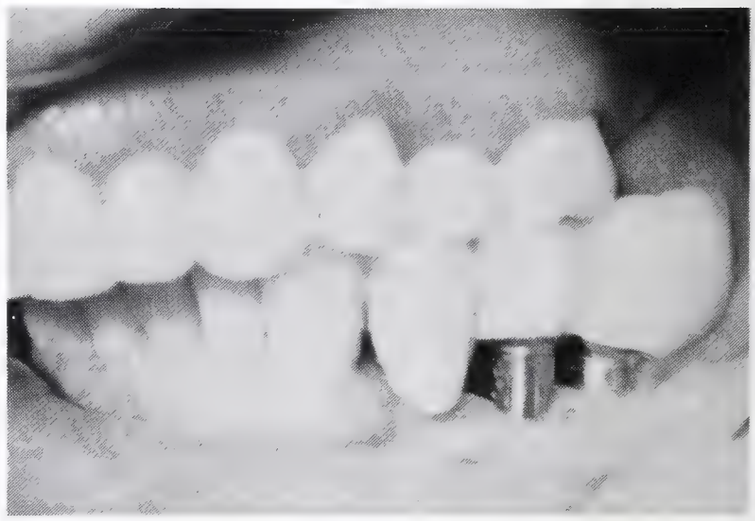
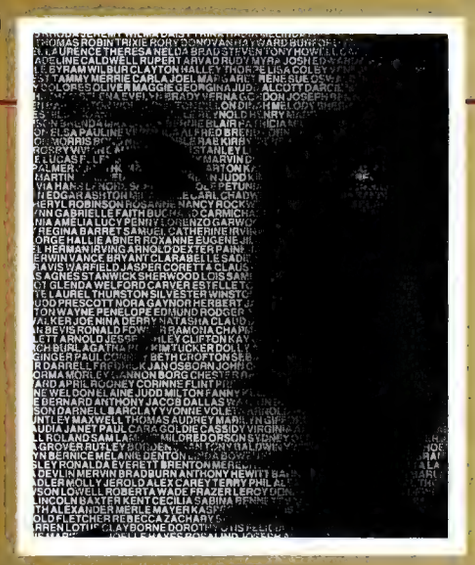


Figure 5C: Intraoral view of fixed bridge left mandible.

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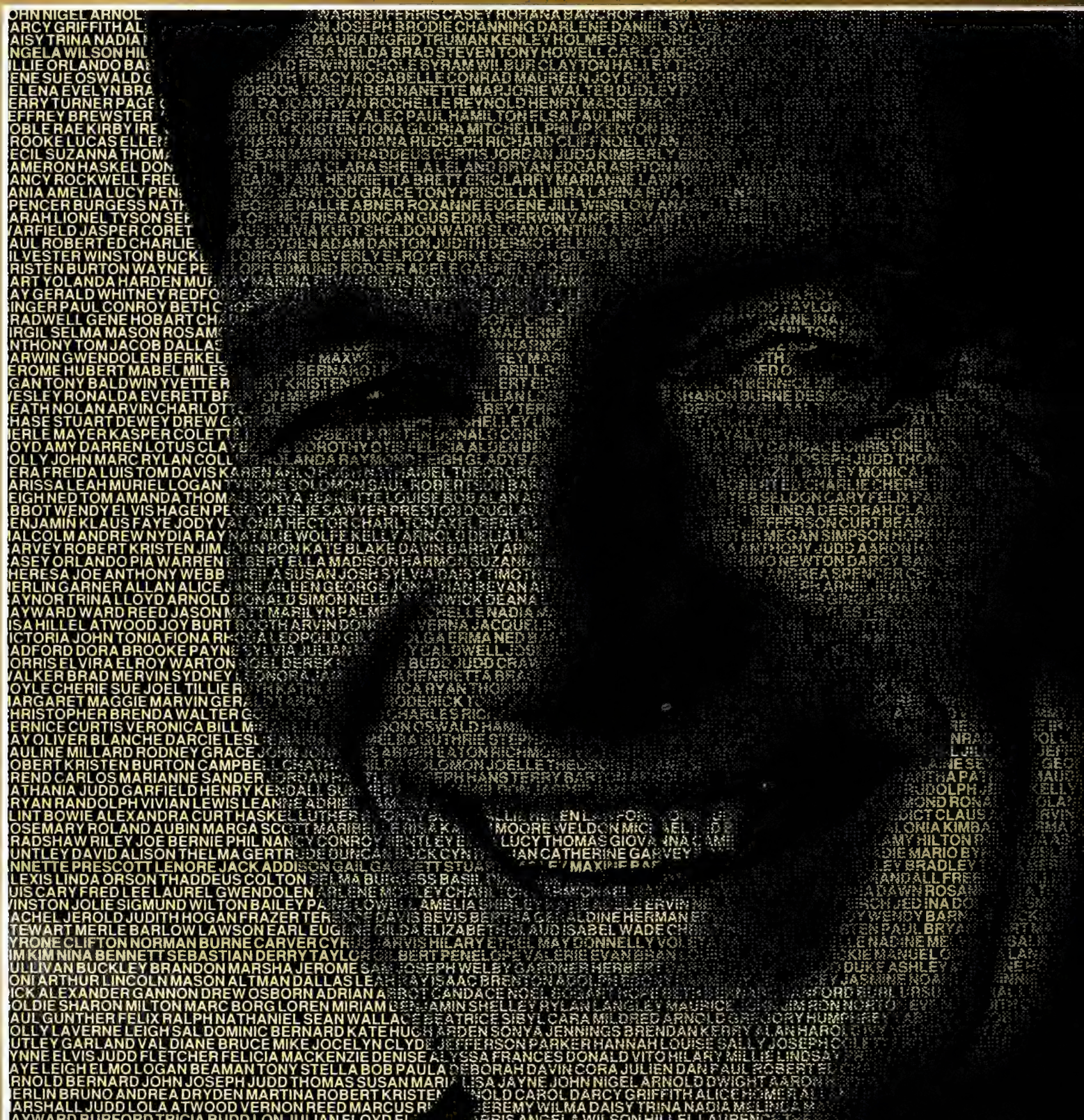
LONG ACTING CAPSULES 60, 80, 120, 160 mg



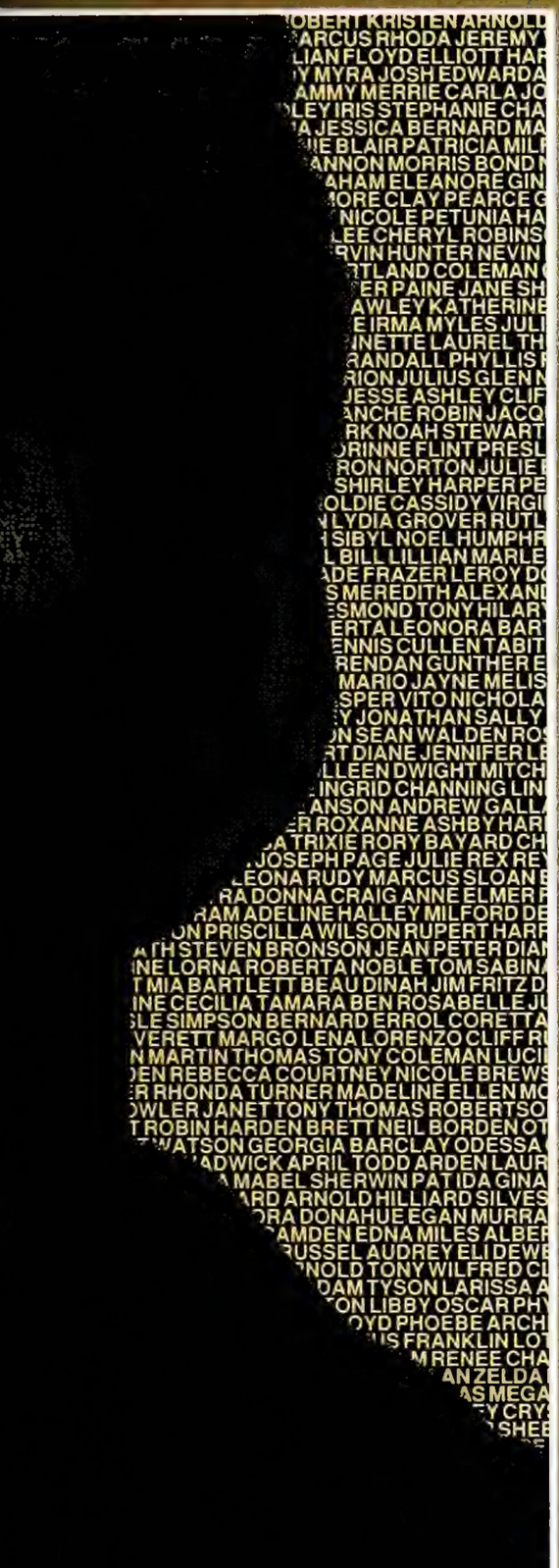
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...like the more than one million patients who have received INDERAL® LA.

In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

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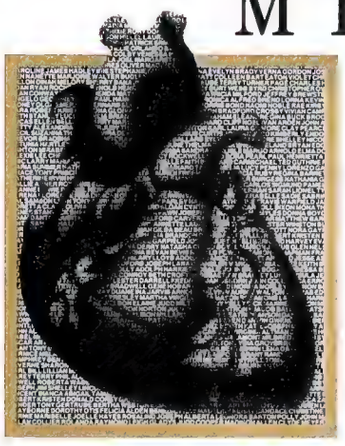
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The one you know best keeps looking better



60 mg 80 mg 120 mg 160 mg*

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:
1. Data on file, Ayerst Laboratories.

D7295/188

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● **Maxillofacial Prostheses.** A special application of this system involves the retention of maxillofacial obturators following tumor surgery and edentulous cleft-palate patients who present unique maxillofacial problems (Fig. 6A-B).[4] Futhermore, these implants have been placed in the midface and skull to retain prosthetic noses, eyes, ears and even hearing aids (Fig. 6C-F).[5,6]

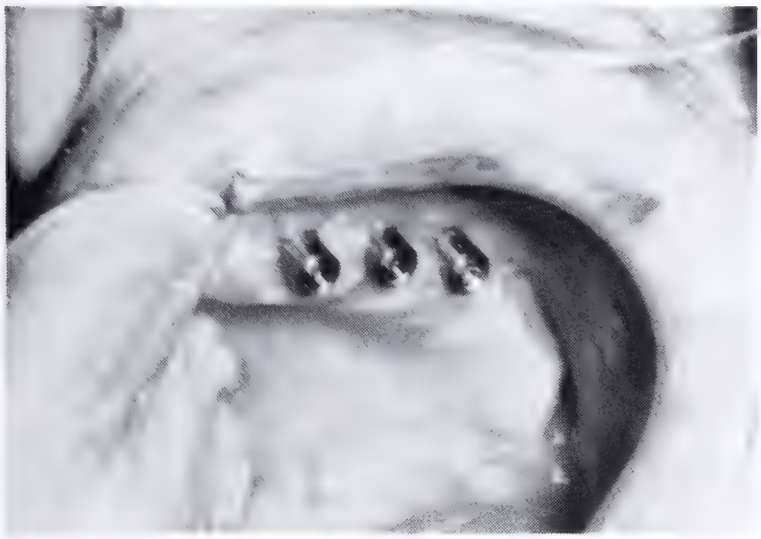


Figure 6A: Three fixtures in right maxilla following left hemi-maxillectomy.



Figure 6B: Intraoral view of maxillary prosthesis.

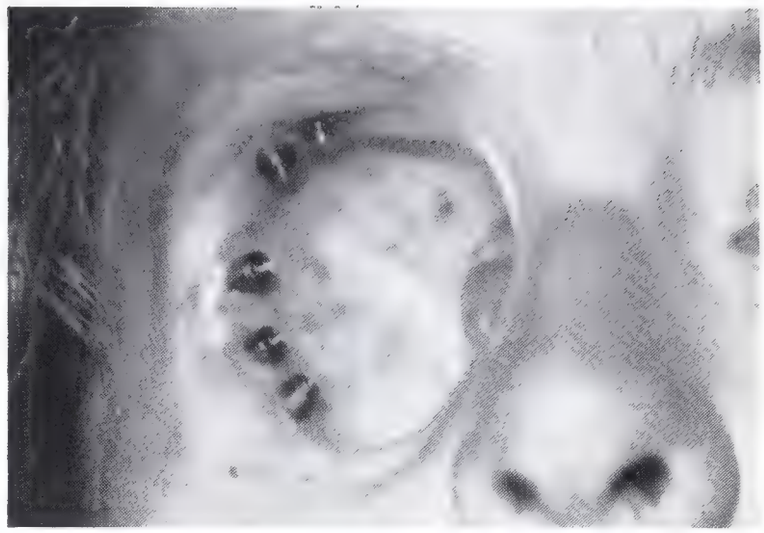


Figure 6C: Periorbital fixtures placed following enucleation of right eye.

Figure 6D: Prosthetic right eye retained by magnets and fixtures.



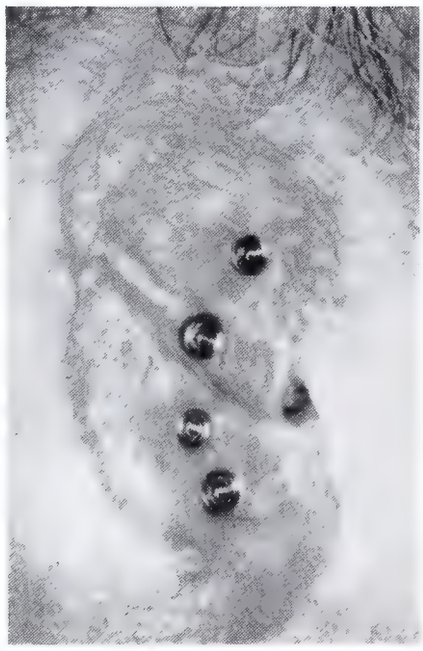


Figure 6E: Postauricular fixtures behind right external auditory meatus.



Figure 6F: Prosthetic right ear secured by magnets and fixtures.

Summary

This article reviews the unique biological phenomenon of osseointegration and a sophisticated system for dental and maxillofacial rehabilitation developed by Branemark. The Nobelpharma System provides optimal restoration of masticatory function and speech with minimal morbidity. Jawbone reconstruction with The Branemark System for Tissue Integrated Prostheses illustrates a tremendous contribution to quality health care through the combined efforts of medicine and dentistry. This biotechnology affords unlimited potential for advances in bionic medicine.

ACKNOWLEDGMENT

The authors thank Dr. Branemark for the development of this technique and the use of his illustrations in Figures 1 and 2.

REFERENCES

1. Zarb GA: The edentulous milieu. *J Prosth Dent* 49:825, 1983.
2. Branemark P-I: Osseointegration and its experimental background. *J Prosth Dent* 50:399, 1983.
3. Adell R, Lekholdm U, Rockler B, and Branemark P-I: A 15-year study of osseointegrated implants in the treatment of the edentulous jaw. *Int J Oral Surg* 10:387, 1981.
4. Parel SM, Branemark P-I and Jansson T: Osseointegration in Maxillofacial Prosthetics, Part I: Intraoral Applications. *J Prosth Dent* 55:490-94, 1986.
5. Parel SM, Branemark P-I, Tjellstrom A and Gion G: Osseointegration in Maxillofacial Prosthetics, Part II: Extraoral Applications. *J Prosth Dent* 55:600-6, 198.6
6. Parel SM, Holt GR, Branemark P-I and Tjellstrom A: Osseointegration and Facial Prosthetics. *Int J Oral and Maxill Implants* 1:27-29, 1986.

In Memoriam: K.C. Chock, MD

Dr. King C. Chock died February 13, 1987. In December of 1972, the Hawaii Academy of Family Physicians honored Dr. Chock for having practiced medicine for over 50 years.

K.C. continued to practice until the very last — until 1986, for a total of a remarkable 65 years. His terminal illness took up his last year of life.

What follows is the tribute his fellow general practitioners accorded him 16 years ago. His widow, Gertrude, and family have graciously permitted this publication in the JOURNAL.

The third boy in a family of eight children in the Honolulu of 1895 would need to have something special going for him to make his way in the world and particularly to venture into medicine as a profession. His father was in the express business. As he grew up, our young lad used to admire the doctors for whom his brother worked — their fine, dignified, well-dressed appearances, and their beautiful offices. This admiration for the Drs. Herbert, Walters, and Humphries (the latter some years later became the physician to Edward VII, King of England) has carried over to the present day. Sitting in his comfortable, well-appointed office lined with books and memorabilia, he is the picture of ageless, dignified charm, neatly dressed, venerable in the wispy chin whiskers of a Confuscius, a long, downward-curving rosewood pipe nestling in its embrace. He is a small man in stature, but a giant in the eyes of his loving patients.

First it was St. Louis College, as that Honolulu high school was then named, then Creighton University and Medical School in six years, and finally a medical degree in 1921. There was an internship of one year at St. John's Hospital in Cleveland, Ohio. He then went to many capitals in Europe as a medical observer, ending up taking studies at Hammersmith Hospital in London in preparation for obtaining the right to practice medicine anywhere in the vast British Empire.

As a "Licentiate member of the Society of Apothecaries" — the certificate he received on successfully passing the examinations — he went out to Hong Kong to set up practice. However, six months later he was overwhelmed by a serious illness: "Homesicknessi hawaiiensis" and returned to start a solo practice at the corner of Beretania and River streets in Honolulu. That was on the first of January 1924.

Our man went on the medical staffs of Queen's, the old Japanese hospital on Kuakini Street, Kapiolani and Kauikeolani Children's. In 1929 he joined H.Q. Pang, MD, and they moved the office to Vineyard Street near the famous old Ohai tree in the middle of the road.

However, he was also doing part-time work with Dr. Trotter of the Board of Health and came very close to giving up private practice and going to Yale's School of Public Health.

He and H.Q. were joined by Ed Lau and Gordon Chang, and in 1958 moved into the present Chock-Pang Clinic building on the corner of Nuuanu and Vineyard. The group now numbers 10.

At 77, our man still puts in a full day and a full week of active practice, even doing his stint on emergency call every fourth Sunday. He gave up surgery in 1958, but still does tonsillectomies, and he delivers an occasional mother of her baby.

He and wife Gertrude have two daughters, Joan Chock and Gloria Chock Dung. Never one to thrust himself to the forefront, self-effacing in the presence of those whom he calls "more and better qualified than I," our physician has never made any waves, as they say, in the professional societies to which he belongs. He joined AAGP's Hawaii Chapter in February 1952, shortly after it was chartered, and has long been a life member. He is not interested in status per se and does not want any special recognition or awards. He has no hobbies or avocation; his medical practice in his life and he is totally devoted to his patients.

The Hawaii Academy of Family Physicians is proud to honor King C. Chock, MD,.this day — 51 years in practice and still going strong!

J.I. Frederick Reppun, MD
December 2, 1972

As you read this, your stocks could be going up.

Or down.

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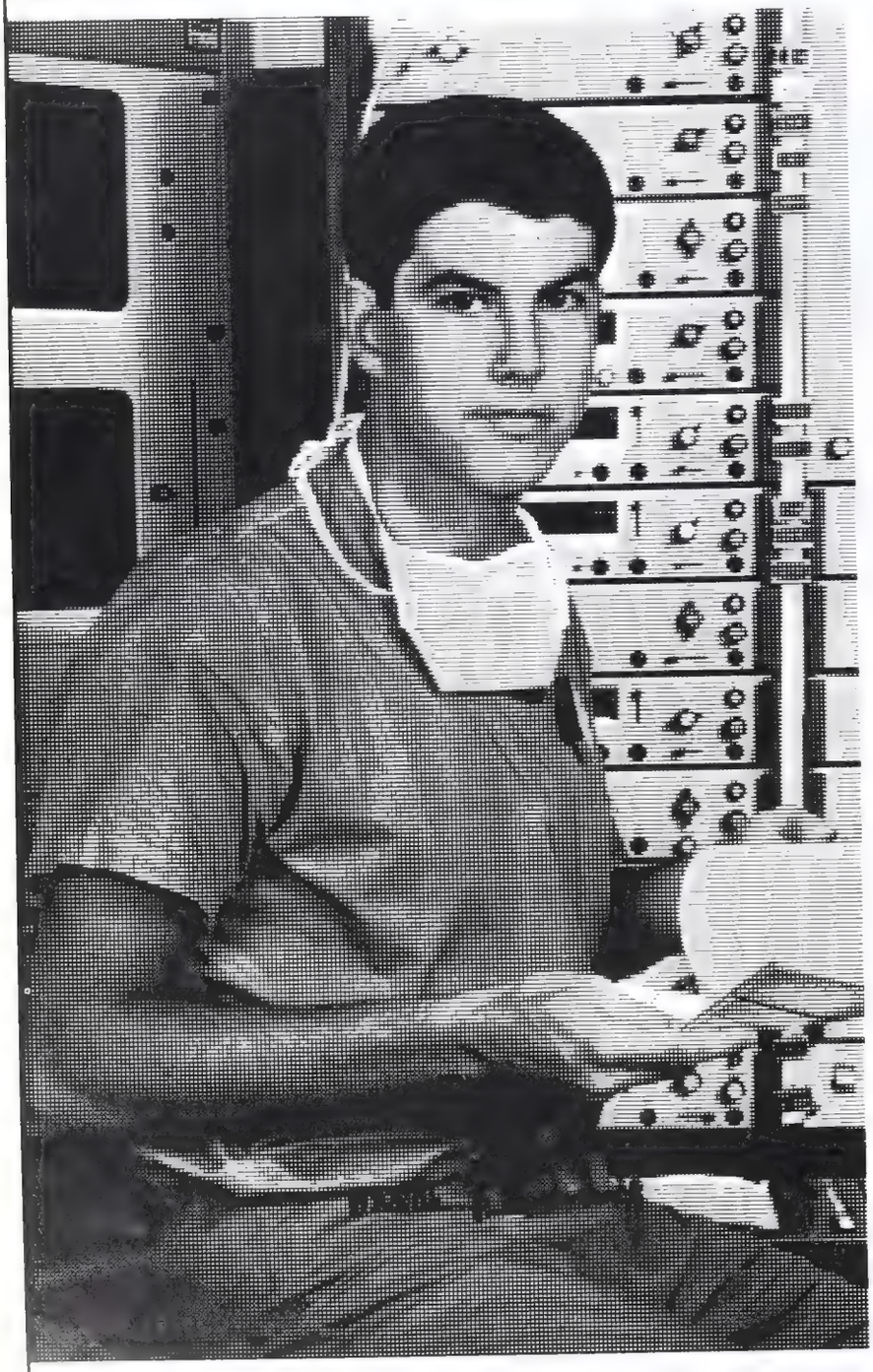
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New Therapy for Cardiac Valve Prosthesis Caused by Microangiopathic Hemolytic Anemia: A Case Report

Robert T.S. Jim, MD*

Microangiopathic hemolytic anemia (MHA) due to the presence of an intracardiac prosthesis can result in clinically significant anemia as a result of mechanical red blood cell (RBC) fragmentation and destruction by the artificial valve. Loss of iron from hemosiderinuria, and increased RBC folate utilization, may also contribute to the anemia. A new approach to lessen the mechanical destruction of red cells, by softening and increasing their flexibility and deformability with pentoxifylline (Trental), in a 72-year-old Chinese man who had an intracardiac valve prosthesis inserted, resulted in improvement in his resultant MHA.

Case Report

The patient had bypass surgery and insertion of a Carpentier-Edwards bioprosthesis mitral valve (size 29) on May 13, 1987. Prior to surgery, his hemoglobin was 14.3 gms. Severe anemia developed with a decrease in hemoglobin to 7.7 gms, and a reticulocytosis of 10.7%. WBC, platelet count and RBC indices were all normal. Blood smear revealed severe anisopoikilocytosis, many spherocytes, stippling, tear drop, burr, helmet forms of RBC, macrocytes and RBC fragments. Serum total bilirubin was 2 mg, direct fraction 0.5 mg and indirect fraction 1.5 mg. Serum creatinine was 1.3 mg, SGOT 78 (normal under 47 units), serum LDH 1040 U/dl (normal under 206). Serum calcium, phosphorous, alkaline phosphatase, total protein, albumin, globulin, GGPT, B12, folic acid and screening G6PD were all normal. Stool guaics, direct and indirect Coombs test, cold agglutinin, ANA and hepatitis profile were negative. Serum ferritin was 1840 ng (normal 25-325). Medications given included digoxin, Lasix, potassium, Coumadin 5 mg daily, oral iron, folic acid 1 mg a day, ASA and vitamins.

Twelve units of packed RBC were required between May 13 and August 8, 1987, to maintain an adequate Hgb level. Pentoxifylline 400 mg t.i.d. orally daily was started on August 27, 1987, which rapidly stabilized the hemoglobin at the 9.0 to 9.6 gm range. No blood needed to be given after August 8, 1987.

Discussion

Pentoxifylline appears to have resulted in a significant improvement in the 72-year-old Chinese man following the insertion of an intracardiac valve prosthesis MHA. Prior to the use of pentoxifylline, there had been a persistence of recurrent MHA with repeated hemoglobin decreases to 7.6 gms; 12 units of blood transfusions were required over a three-month period. Ten to 12 days after the medication was started rapid reduction in hemoglobin did not occur. Stabilization in the 9 to 10 gm range did take place, and there was further need for blood transfusions. Pentoxifylline can improve RBC flexibility and deformability; it may have improved the MHA by making the red cells softer and less fragile, less subject to mechanical destruction by the cardiac prosthesis.

The possibility remains, however, that improvement in the MHA was a result of increased cardiac valve endothialization, causing less mechanical damage to the RBC. The failure of reticulocytosis to subside have been due to the persistent stimulus of the anemia itself.

Pentoxifylline may be a promising new and effective way of reducing the MHA due to cardiac valve prothesis.

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Recognizing Occupational Stress-Related Injuries

Harry K. Davis, MD*

Beginning in the 1970s, occupational stress-related injuries have been recognized in addition to the traumatic physical injuries that occurred on the job. As this concept was expanded, it included "repetitive mentally and physically traumatic activities extending over a period of time, the combined effect of which causes any disability or need for medical treatment," as set out in the California Labor Code Section 3107.[1] Thus, to Workers' Compensation Insurance was added another segment of coverage for illness.

Stress is universal and omnipresent; so why is it a workplace problem?

The etiology of the stress-related injury arises from a conflict between one's basic needs and the environmental possibilities for dissatisfaction. It is not the stress itself that produces symptoms; it is the worker's inability to counter with forces that provide work satisfaction, a sense of achievement and a meaningful experience. Work rewards may be subtle, but they provide for human needs, such as a sense of personal dignity and importance, a feeling of being recognized as a person and of being appreciated.[2] According to Levi et al,[3] social stressors in the work environment are due to: (1) Quantitative overload i.e., too much to do, time pressure and repetitive work, (2) qualitative underload, i.e., too narrow and one-sided job content, lack of stimulus and no demands for creativity or problem solving — (it is worse with automation), (3) lack of workers' control, especially in relationship to the workplace and working methods, and (4) lack of social support at home or from fellow workers.

The attending physician and the worker are confronted with the question: "Is the stress injury and its complications work-related and compensable by workers' compensation insurance?" The work relatedness of physical injury is usually undisputed, but psychological causes are often unclear when the injury is stress-related. The attending physician, often not a psychiatrist, is confronted with the perplexing problem, while being an advocate for his injured worker/patient of not knowing whether to, or how to, proceed to validate the occupationally induced stress so as to establish Workers' Compensation coverage.

It is the purpose of this paper to establish some guidelines for more objectivity and less emotionally-charged anecdotal reporting of stress-related injuries. Establishing these criteria will diminish the physician's insecurity when the worker actually demands workers' compensation coverage. At the same time the worker will be less resentful when clear-cut criteria delineating stress-related injuries are presented to him, if and when Workers' Compensation approval is denied.

Physicians are confronted with the choice between medical or legal definitions of stress-related causality. The *medical* definition implies that the stressor was necessary to produce the change, OR that there is a likelihood the stressor will produce a similar change when subsequently reapplied. The *legal* definition of causality simply means that the stressor could have contributed to the result, OR is the last proximate stressor creating the change. The legal definition of causality also includes the precipitating cause, the proximal cause and the contributing cause. In any case, existing case law may ultimately decide causality of the occupational injury. For the most part, both the psychiatrist and the non-psychiatrist physician work with the *medical* definition of causality.

The professional, particularly in Hawaii, who examines stress-related injuries, decides whether it is occupationally causally related according to the current law. If the professional uses the medical definition, he tries to establish causality when the cause is likely to have produced the effect. Once the diagnosis of a work-related injury is made, the worker may be compensated under workers' insurance. This can be confirmed or reversed by the arbitrator or the courts. Basically, two considerations are important in reporting stress-related occupational injuries.

First, there must be some uniformity in examining an injury, i.e., individuals with stress-related injuries should be evaluated under similar guidelines, allowing only minor discrepancies that might occur with differences of professional opinion. For instance in physical injuries, if a hernia is suspected, every physician who examines such a patient should perform a similar type of exam, with a resultant high correlation of findings. The same technique should apply to stress-related injuries. Second, every effort should be made to maintain objectivity in spite of the patient's need to have an advocate. Obviously, differences of opinion may ensue if a detailed anamnesis from the patient, his family, as well as from other interested parties is taken. The collaboration of one's peers will enhance the objectivity of the evaluating professional.

How then can a professional accomplish an examination that produces an accurate, unbiased evaluation that is fair to the patient and to his employer or the latter's insurance carrier?

The report submitted should identify the occupational stress and how it relates to the worker's physical and/or emotional symptoms and/or injury. It is well to remember that this report will be read by non-medical audiences; it should be written in language that minimizes medical and legal jargon, so as to be

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easily understood. If the examining physician receives a request from an involved agency with questions in administrative or legal terms, he should be sure that he understands the questions posed. Ambiguous or unclear questions by the referring source can distort the replies. A clarifying phone call may be necessary. Brief, concise, understandable reports that render specific opinions and recommendations help to eliminate the ambiguities for all parties concerned.

Causality in stress-related injuries in compensation cases is difficult to evaluate objectively. The essential elements are: (1) The relationship between external workplace stressors and the worker's susceptibility to such stress (a worker who has had recurrent depressions in the past becomes depressed on the job because of the loss of an expected promotion; this is no different from the other depressive episodes precipitated by previous losses; (2) After workplace stressors take place, the psychiatric symptoms soon appear (a co-worker standing close by is electrocuted; the worker develops psychosomatic cardiac symptoms three days later); (3) The worker has an inherent vulnerability to stress (a worker may be vulnerable to workplace stressors because he has suffered recent emotional trauma in non-occupational settings, i.e., within the family, personal conflicts, divorces, alcohol abuse, etc.

Guidelines for Making a Narrative Report

I. The narrative report should begin with a brief, concise statement of the alleged injury and should include, of course, the stressors involved. This statement should also include the sources and the information obtained from the worker, from management, from the worker's peers, and from his family, concerning the stress and the injury. Any specific extraneous stressors that the workplace situation might have intensified, should also be mentioned.

In evaluating stressors that cause an injury, it is helpful to keep in mind that damage can result from a broad spectrum of trauma (from minor insults to self-esteem, to life threatening events). Over-reactions to stress can occur frequently in the emotionally vulnerable person, e.g., non-constructive criticism by a boss may be taken by an overly sensitive person as rejection — the kind of rejection felt by a child of a harsh, rejecting, non-accepting parent.

II. The professional should survey the workplace for stressors. When a detailed history of the workplace is obtained one can often find that work-related injuries occur as manifested by high absenteeism, low moral, high incidence of psychosomatic complaints registered by employees, as well as there being a history of incompetent, do-nothing management. Other stressors that can arise in the workplace include: (1) Jobs that have too many specific and detailed requirements; (2) multiple work deadlines; (3) repetitive, boring work patterns; (4) the worker is isolated from fellow workers; (5) there are extremes of temperature; 6) factors such as excessive fatigue, inadequate rest periods, poor lighting and other personal discomforts.

Psychological stressors can often be identified as (1) poor morale, (2) ethnic problems, (3) sexual and/or personal harassment, (4) helplessness and powerlessness, (5) poor training for the job, (6) inadequate preparation to cope with job stresses, (7) lack of motivation and (8) emotional desensitization.

III. The professional needs to correlate the onset of symptoms (especially anxiety symptoms) with the presence of identifiable stressors.[4] The shorter the time lapse between the stressor and onset of symptoms, the more the results are predictable. The worker's medical history may reveal why workplace stressors have an effect on a given personality structure under existing psychosocial conditions. Patterned responses become understandable. The more factors that can be linked to a stress-response, the stronger is the case for a stress-related work injury.

Classical stress symptoms are changes in sleep, appetite and sex patterns, confusion, overt tension, decreased work productivity, irritability, increased alcohol and drug use, absenteeism, mood swings (especially depression), apathy and non-conformity. Stress-related claims may be presented even when there has been no history of previous such claims.

Workers' Compensation laws make the assumption that the worker's emotional health is presumed to be good enough when he is hired, and the employer must take on the responsibility of compensating the worker for his injuries. Often, non-occupational stress can set the stage for disabling work-stress symptoms. Off the job stressors, e.g., death or divorce do not obviate the effects of the workplace stressor, which results in both physical and psychic symptoms. There is validity in the argument that life's stresses are cumulative; thus social and interpersonal stresses outside the workplace can be aggravated by workplace stressors, which may then cause the worker to decompensate.

IV. The report should continue as it would ordinarily be submitted in any work-related injury; it should include clinical findings that substantiate both psychiatric and medical diagnoses. Psychiatric/psychological diagnoses should follow DSM III or DSM III R outlines.

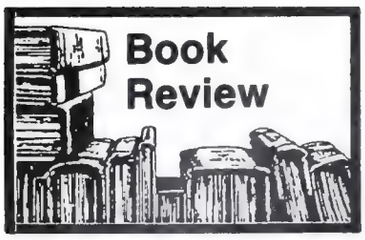
V. The professional should make recommendations for:
- Further diagnostic testing,
- Immediate and future treatment programs,
- Referral if indicated, to consultants either for evaluation or for treatment, who may be either medical consultants or those who specialize in psychiatric/psychological evaluations and treatment programs.

Summary

This paper is an attempt to present an organized approach on the part of the non-psychiatrist physician for the recognition and reporting of a stress-related occupational injury. An outline for a narrative report to the insurance carrier and/or psychiatric/psychological consultant(s) may help the physician or other professional who has to deal with such alleged injuries.

REFERENCES

1. Danken H: "Workers' Compensation: Opening up a major market for Psychological practice," *Professional Psychology,* 837, Dec 1979.
2. Wolf SG, Finestone AJ: *Occupational Stress,* PSG Publishing Co. Inc., Litteton, Mass., 24.
3. Levis L (ed): Society Stress & Disease: *Working Life,* Oxford, N.Y., Toronto, *Oxford Univ Press* 1981, Vol 9.
4. Goldney RD: Elucidation of Psychological Factors in Compensable Injury, *Med J Aust* 1984 Sept 29:141(7)433-6.



When Doctors Get Sick, Edited by Harvey Mandell and Howard Spiro, Plenum Publishing Corp., 1987.

The Hindu proverb asserts "Ask the patient, not the doctor, where the pain is." Worlds away, a Yiddish sage declared "Fregt nit dem royfe, nor dem khoyle (Don't ask the doctor but the patient)."

Clinician Harvey Mandell and academic Howard Spiro, colleagues from Connecticut, have followed these dictums. *When Doctors Get Sick* is a compendium of 50 first-person narratives by physician-patients that deserves scrutiny by all healers, no matter what their professional persuasion.

As physicians, many of us feel omnipotent, immune to microbes, protected from infirmity; we do not follow the prudent counsel we daily espouse. As one who practices this form of denial, I can also recognize it in my peers. The same theme runs through many of the vignettes in the collection.

Somewhere in this volume we will each find ourselves, albeit doppelgangers frequently less fortunate than we are. Their eloquence, insight, and occasional rage tutor us. They have trod the path upon which many of us have not yet found ourselves. We should be grateful that they were willing and trusting enough to confide in us this way.

When Doctors Get Sick teaches us more than what we may experience when our turn comes. It is an insight into the world of the patient, a realm many of us do not glimpse very often. Insulated as we are, inured to suffering of various degrees, sometimes jaded, busy with "getting and spending," how many of us can sit and listen without sensing in the background the clock ticking, and the waiting room filling with restive patients?

Savor these vignettes in the quiet of your evenings. They are your voice; they are your colleagues' voices; they are the voices of your patients. It is the voice of suffering translated into a jargon we all understand, the peculiar "pidgin" of the healer.

The 50 narrations cover a panoply of pathology. Some physician-patients sailed through their illnesses on calm seas, their journey directed by competent captains and crews. Others, like Judith Alexander Brice (Ulcerative Colitis), were tossed and tortured for what seemed like an eternity on barks that could have been crafted by Poe. Writing of the unimaginable callous neglect after her colectomy at a prestigious hospital, Brice avows "the wrenching terror of that night and of that hour has remained as vivid as if it happened to me yesterday. . . . Cruel neglect had become a reality. . . . I know the terror of its recurring and I fear that terror will loom before me forever."

A particular beauty of this book is its changing voices. They confer a spectrum of emotions and human conditions. Each physician-patient takes a turn in bearing witness to what he saw and experienced on the other side. That perspective is one we do not hear enough about in our medical schools and postgraduate seminars. Nor can we experience it all. We can, however, learn from these travelers, to be worthier custodians of those entrusted to our care.

Lawrence R. Freedman, a contributor (Cerebral Concussion), writes ". . . the human aspects of illness and medical care are not infused with the attention and emphasis that they deserve. In the physician, human understanding and involvement is presumed to be inborn and then enhanced by experience — and sometimes is. But 'sometimes' is not enough. . . ."

This book supplements the education I did not receive in medical school, and I am thankful for it. These are tales to pore over; each one has a message: To make us better doctors, and patients, and people.

In their epilogue, the editors summarize: "The sick doctors remind us that we are all links in a chain and that just as we are fathers and sons, mothers and daughters, we are doctors and will someday be patients, and that our lives run along a precipice that separates life from death." Yes, this book teaches us about ourselves and it is especially interesting to us because afflictions are our special interest. But the volume also drives home the fact that we are one with our patients, and they are likely to react to infirmity in much the same way that we "professionals" do.

Sir William Osler said, "To talk of disease is sort of like Arabian Nights entertainment." *When Doctors Get Sick* continues this tradition. It is as captivating for the modern healer as Scheherazade's tales were for The Sultan Shahriar. As physicians we are mandated to read it, mandated and compelled. This compulsion *all* healers will relish.

David J. Elpern, MD
Lihue, Kauai

The State of the World's Children 1988
James P. Grant.

United Nations Children's Fund has published its eighth annual report, *The State of the World's Children 1988* by James P. Grant, executive director of UNICEF. The emphasis of this report is the "Grand Alliance for Children," a growing alliance of social resources for putting today's health knowledge at the disposal of today's parents.

The opening statement notes that "one death in every three in the world is the death of a child under the age of 5. Each week that goes by, more than a quarter of a million young children still die in the developing world, from frequent infection and prolonged undernutrition." The issues with which UNICEF is actively concerned in the over 100 nations of the developing world is one of child survival and child development.

Dramatic, low-cost possibilities for solution are discussed in this report. The

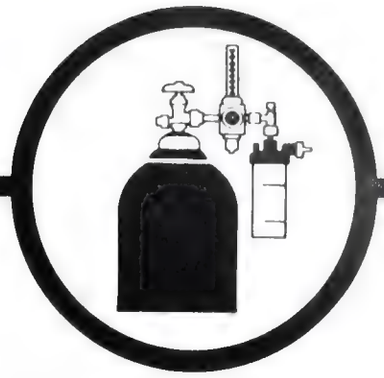
first area for solution is by informing and supporting parents themselves in such basic and inexpensive actions as immunizations, oral rehydration therapy for diarrheal disease, breast feeding in early months, spacing births at least two years apart, early prenatal care and active practice of home hygiene. At least 50% of the deaths each week could be prevented. Secondly, with improvement in education and communications, government services and non-governmental organizations could be mobilized to inform and support the majority of the developing world's families in using today's knowledge. This would be a major opportunity to advance primary health care.

The report touches upon the potential threat to children of economic recession. It also emphasizes the "rights" of families to have knowledge about timing births, safe pregnancy, promotion of normal growth and development; of how to manage acute respiratory and gastrointestinal infections; of how to deal with smoking, alcohol, AIDS and hygiene. It also discusses the partners in the alliance: Health services, the school system, business and labor, organized religion, the media, the voluntary agencies and the general public.

The report reflects on the observation that the women of the developing world need more support from all levels of society. One must not be the advocate for only the child, but also for the mother!.

The conclusion is that the crucial element for success is the participation of all possible resources in a "Grand Alliance for Children." If this "social breakthrough" could be added to the "knowledge breakthroughs," then it would be possible to reduce drastically the child deaths and child malnutrition in the next decade throughout the world.

Calvin C.J. Sia, MD



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Include numbers of observations and the statistical significance of the findings when appropriate. Detailed statistical analyses, mathematical derivations, and the like may sometimes by suitably presented in the form of one or more appendices.

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Clinical Pathologist's Easy Chair

Francis H. Fukunaga MD

Apolipoproteins

There are many risk factors that contribute to coronary artery disease (CAD), and the factor with the highest correlation is the serum lipid level. The association of serum cholesterol levels and atherosclerosis was first suggested when familial aggregates of hypercholesterolemia with CAD were demonstrated, and further studies showed a high prevalence of CAD whenever the cholesterol was high.[1]

The cholesterol level alone, however, is not the best universal criterion for the identification of CAD risk. Atherogenicity of circulating cholesterol depends upon its distribution in each class of lipoproteins. There is increased CAD risk with LDL cholesterol but decreased risk with HDL cholesterol.[2] The measurement of serum cholesterol and triglycerides had been used to assess CAD risk factors for several decades, and the measurements of HDL and LDL cholesterol were added in the last decade. Recent reports indicate that the apolipoproteins are better predictors of CAD risk. The identification of patients with angiographically significant CAD is better discriminated by Apo A-I than serum cholesterol, triglycerides or HDL cholesterol.[3,4] Children whose fathers had an acute myocardial infarct had a lower Apo A-I than those whose fathers did not have an MI. These associations were independent of the child's age, race, sex, history of obesity, smoking, or use of oral contraceptives.[5]

Apolipoproteins are important structural parts of the lipoprotein particles and take part in the lipoprotein synthesis, secretion, processing and catabolism. They provide a coat that solubilizes the lipid component of the various lipoprotein particles. Lipoproteins are spherical structures with a core of the hydrophobic triglycerides and cholesterol esters surrounded by a layer of amphiphilic phospholipids and nonesterified cholesterol apolipoproteins. Some of these apolipoproteins are functional structures of the surface layer while others are transferred between lipoprotein particles. There are at least 10 different apolipoproteins, but those considered clinically important with the potential of predicting coronary artery disease risk are Apo A-I and Apo-B.

Apo A-I is the major protein component of high-density lipoprotein (HDL) and makes up about 30% of the HDL mass and 65% of the total HDL protein. It is the co-factor for the enzyme lecithin: Cholesterol acyl transferase (LCAT), that converts free cholesterol to cholesterol ester. This process makes the cholesterol on the surface of the HDL less soluble, and the esters move to the interior of the lipoprotein particle. Cholesterol esters are taken up by the liver, and cholesterol is thus removed from the system.

HDL cholesterol levels correlate with Apo A-I levels, but Apo A-I levels more closely reflect the reduced risk of atherogenesis than any of the HDL cholesterol markers.[6] A Swedish study of male survivors of myocardial infarction with normal HDL levels showed decreased Apo A-I levels.[7]

Apolipoprotein-B is the major protein constituent of low-density lipoprotein (LDL or beta lipoprotein) and is also found in chylomicrons and very low-density lipoproteins (VLDL). It is the largest apolipoprotein and is the only protein in LDL. Apolipoprotein-B is required for the secretion of intestinal and hepatic triglyceride-rich lipoproteins into the plasma. Apo-B-100 is synthesized in the liver and is responsible for the packaging of triglyceride and cholesterol into VLDL. Apo-B-48 is synthesized in the intestine and plays a similar role in packaging chylomicrons. Both play important roles in the synthesis and degradation of cholesterol. They control the interaction of LDL and partially catabolized chylomicrons with specific receptors of the liver and extrahepatic cells.

The Apo-C family is associated with all lipoproteins except LDL. They are believed also to activate LCAT and LPL (lipoprotein lipase). Apo-E is present in a much lower concentration than Apo A-I and Apo B-100. It is synthesized in the liver and is associated with all major lipoprotein classes. The hepatic Apo-E receptors are found at the same site as the Apo-B receptors, and there appears to be competitive interaction between the Apo-E and Apo-B with a common receptor. There are several isoforms of Apo-E that are distinguished by their cysteine and arginine content. Type III hyperlipoproteinemia has an abnormal form of Apo-E. The study of Apo-E phenotypes suggests that homozygosity to E2/2 and E4/4 predispose to hyperlipidemia.[8]

Serum Apo A-I and Apo-B levels correlate better with the severity and extent of coronary artery stenosis than the total serum cholesterol and triglyceride levels. Most lipid experts recommend primary screening with total cholesterol, triglycerides and HDL cholesterol and a calculation of the LDL cholesterol. The abnormal patients with borderline or elevated lipid levels should have their Apo-A-I and Apo-B measured. Some authors feel that the ratio of Apo-A-I/Apo-B better correlates with CAD risk than either apoprotein alone.[9] The cut-off ratio is 1.325; those with increased CAD risk have lower Apo-A-I/Apo-B ratios. The assay of apolipoproteins is preferably performed on fresh plasma specimens, but if not possible, the plasma should be frozen and stored at -70°C.

REFERENCES

1. Thanhauser SJ et al: Apolipoprotein B and A-I coronary heart disease in humans, *Arteriosclerosis* 4:79-83, 1984.
2. Eder HA & Gidez LI: The clinical significance of plasma High density lipoprotein, *Med Clin NA* 66:431-440, 1982.
3. Maciejko JJ et al: Apolipoprotein AI as a marker of angiographically assessed coronary artery disease, *New Eng J Med* 309:385-389, 1983.
4. Kottke BA et al: Apolipoproteins and coronary artery disease, *Mayo Clinic Proc* 61:313-320, 1986.
5. Freedman DS et al: The relation of apolipoproteins A-I and B in children to parental myocardial infarction, *New Eng J Med* 315:721-726, 1986.
6. Schwartz RS: The independent effects of dietary weight loss and aerobic training on HDL and apolipoprotein A-I concentration in obese men, *Metabolism* 36:165-171, 1987.
7. Franzen J and Fex G: Low serum apolipoprotein A-I in acute myocardial infarction survivors with normal HDL cholesterol, *Atherosclerosis* 59:37-42, 1986.
8. Assmann B et al: Apolipoprotein E polymorphism and hyperlipidemia, *Clin Chem* 30:641-643, 1984.
9. Naito HK: The clinical significance of apolipoprotein measurements, *J Clin Immunoassay* 9:11-20, 1986.

Council Capers—April 7, 1988

No Can Do . . . Who would believe that a few months after the HMA office building was completed, it would be over 90% occupied? Well, it is and I sure wish I had invested a whole lot more in this venture because it will sure promise a good return.

Council Chow: Before each council meeting, there is a dining "adventure." This time there was a haole Luau. By that I mean the kalua pig was of the aluminum foil, liquid-smoked variety.

Ray of Sunshine: Representative Fred Hemmings met with the Council and gave us an update of the present session of the legislature. He expressed his displeasure of the "tort reform" bill passed recently, which did not address the problem adequately. He also distributed reprints of a recent article in Pacific Business News, which quoted him as saying that the State "should get out of the Hospital Business." He also mentioned that he and Senator Mary George have been trying to get the State to reform the Certificate of Need process, which 11 states, including California have done recently.

Shame On You: Only 67% of the Maui County members have paid their dues as of April 7, 1988. I know, on April 15th, Uncle Sam came first...

Medical Coalition for Tort Reform: Only $86,000 or 16% of physicians have supported this important committee — please, please...

Legislation: Becky Kendro gave an update of the legislative happenings. The Legislative Committee has been very active and doing a good job representing each and every one of you.

*Good News...*MIEC has no plans to increase your malpractice premiums as of August 1988.

Tip of the Month: The very best Baked Manapua can be found at Royal Kitchen. You got to try the Portuguese Sausage Manapua (a whole sausage baked in a delicious bun). Well, how about Maui? The very best Sunday Brunch is at the Maui Prince....sumptuous!

Denis J. Fu, MD
Councilor from
Maui County Medical Society

HMA Committee Reports

The January meeting of the **Chronic Illness and Aging Committee** of the HMA met under the dedicated leadership of Dr. Walter Quisenberry. During the past year, Quisenberry has brought to the Committee reports germaine to problems we see in our practices — and ultimately in ourselves, friends and extended families. How are we going to pay for long-term care? How are we to meet the problem of Alzheimer's Disease and the other dementias that affect great numbers of the aged? And how are we to assure that the elderly are not neglected?

This year's committee work started with an outstanding report by Shirley Kidani. She and others shocked us with stories of starvation, beatings, financial exploitation and other abuses that beset some of the elderly. The numbers presented were hard to believe in this so-called "civilized" society in which we live. Our AMA reports that "one in every 25 Americans age 65 or older — 1.1 million — suffer moderate to severe abuse . . .," and that "as many as one in 10 elderly Americans suffers abuse at one time or another." Locally, the picture is equally distressing. If we may assume that conditions here are similar to some reported areas of the Mainland, an estimated 4% of our elderly may be victims of abuse. In Hawaii, this represents about 4,000 cases, of which only 150 are being reported!

Kidani is the program coordinator for the Elder Abuse Project of the Child and Family Service. This organization, which has served Hawaii since 1899, provides the support services to the Community Elder Abuse and Neglect Task Force (CEAN). The latter is an informal organization of over 40 participants from the State Departments of Human Services and Health, several medical and social service organizations; groups dealing with aging, adult care and Alzheimer's Disease; the Attorney General's office, the Police Department, and others. It has met regularly for the past two years "to share information, to give input to organizations that plan and implement programs related to elder abuse, and to plan strategies for improvement." This is no small task, as the theories of causation are many: Frustration, various stresses, family dynamics, personality traits of the abused and of the abuser, negative stereotypes applied to elderly people and their role in society, and the interplay of these factors.

As pointed out by George Mills in his usual cogent manner, the small percentage of elderly who are in long-term care facilities are generally in good shape. However, the vast majority of elderly are not in such facilities, and monitoring their care is virtually impossible. It is here that physicians may be able to play their greatest role, as it is they who readily see the signs of physical and emotional trauma. The recent brochure sent out by the HMA, "Reporting Abuse of the Elderly," details many of the indicators of abuse. It assures us that as physicians we are to report such, and that "any person making a report in good faith will have immunity from any liability, civil or criminal, that might be otherwise incurred or imposed by or as a result of such report."

(This reporter would like to commend Dr. Quisenberry for the material he continues to bring before the Committee. The term, "aging" is not a lovely one. But half of us are going to get there! Join up with the Committee to assure yourselves that when you get there, things will be better!

Samuel Allison, MD

My Mana'o

Medical Coalition for Tort Reform Needs "Lifters"

MCTR — the Medical Coalition for Tort Reform — met at HMA on April 7, 1988, with a fair attendance, including one member from Maui, Russ Stodd. It was a good meeting in the sense that short-term and long-term goals were discussed.

John McDonnell, supplemented by Becky Kendro and Neal Winn, disclosed that out of some 1,800 practicing physicians in the State of Hawaii, 306 have put their dollars where their mouths are.

Some thought this was "pretty good," compared with such appeals in other venues for one reason or another; others thought this indicated the doctors are *not* behind the considerable effort on the part of a few dedicated individuals.

There was discussion as to the why of this. It was agreed that mailouts often get lost in a pile on the busy physician's desk or end up in File 13 together with all the other junk mail. Like most people, doctors tend not to deal with money requests right away; maybe the notice and request are still in the stack on the desk! Probably patient care comes first anyway — an all-consuming task — as it should be.

It was agreed that MCTR needs to get with it harder and more persistently.

It was agreed that most physicians are behind the concept of developing a "war chest" with which to lobby hard for tort reform, but simply cannot zero in on contributing dollars — yet. Some, undoubtedly, figure it is a waste of time, energy and dollars to do so; others accept fate as inevitable — might as well lie down and be run over rather than fight.

In summario, there are the "lifters" and the "leaners." "Let George do it! I'll accept what George wins (in this case it is Jim, Neal and Phil rather than George), but I can't be bothered by participating, i.e., putting my shoulder to the wheel."

It was agreed that staff would distribute a questionnaire to all practicing physicians, asking them (a) whether they supported the concept outlined by MCTR, (b) whether they would contribute the wherewithal, (c) whether they intended to contribute $400 or $200 according to their specialty or (d) what amount do they think is worth contributing? The answers would give MCTR some idea as to whether it represents the physicians of Hawaii. Right now, it isn't sure that it does, but thinks it does.

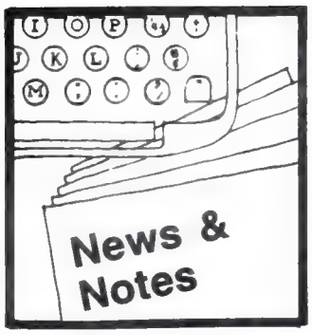
It was agreed that concomitantly MCTR would embark on a vigorous campaign to educate the general public — the people who are the patients of these physicians — on why tort reform is needed. Many lay persons do not know the meanings of "the cap" on pain and suffering, "contingency" lawyer fees, "statute of limitations," the "deep pocket," etc. We have been using *our,* and legal, terminology and not words that lay people can understand.

The Coalition has also begun to discuss long-term goals. Up to now, it has focused on the immediate goals: Trying to effect change by lobbying at the State Legislature. The present session of the 14th State Legislature will have ended by the time this review is published in the JOURNAL; it will have accomplished almost nothing in the way of tort reform (this is an election year, remember!). MCTR intends to work hard in preparation for the 1989 session, again mostly on short-term goals. These are (a) a cap on non-economic damages, including pain and suffering, (b) abolition of the joint and several liability (deep pocket), (c) allow for periodic payments, (d) allow consideration of collateral sources of payment, (e) establish a sliding scale for contingency fees and (f) require a certificate that the suit has merit.

The long-term goals have been presaged by developments in Florida and Virginia, that we hope is in the direction of separating actual malpractice from unexpected maloccurrence, the latter protected by insurance funded by patients and doctors (and hospitals) together.

Finally, HMA members — and *all* Hawaii physicians — need to join the "lifters" with effort *and cash,* rather than sit back and be the "leaners." How can physicians enlist the support of their patients, or drum up the support of corporations and unions, unless *we* show significant support within our own ranks?

J.I. Frederick Reppun, MD
Editor



HENRY YOKOYAMA, MD

Life In These Parts

As Others See Us . . .

We called our golf partner's office on a Saturday morning . . . Roy Iritani's receptionist and gracious wife, Ramona, answered . . . "Is Roy playing this afternoon?" we inquired . . . "I believe so . . . He has on a big smile this morning. . . "

Mitsi, our witty afternoon receptionist received a call from a crusty woman patient . . . "Is he in a good mood today?" she inquired . . ." "Yes, he played tennis at noon today," Mitsi remarked. "Well, better make all my appointments on Wednesday afternoons," the crusty one remarked. . . ."

Old Soldiers Never Die . . .
They Simply Fade Away . . .

Col. (ret.) Al Majoska (of City & County coroner fame) called QMC one evening for an emergency consultation . . . Al spoke to the second-year medical resident on-call about his patient, a boxer . . . The patient had been treated with a broad spectrum antibiotic for a skin condition and developed a fulminating diarrhea . . . The resident discussed at length her differential diagnoses and available treatments . . . Finally she asked, "Dr. Majoska, when are you admitting your patient?" Al: "Oh no — That's not indicated . . . The boxer is my dog. . . ." (As related by Suzanne Yokoyama R2)

Seventy-four-year-old Lorenzo Cabanilla of Oahu was the happy recipient of Hawaii's 500th cornea transplant in January . . . The surgery was performed by Straub's Rhodes Stevens and coordinated by the Hawaii Lions Eye Bank and Makana Foundation . . . The Eye Bank program was started in October, 1980; Elizabeth Dixon, administrator, says corneas are the most-needed tissue donation anywhere. . . .

An HMA survey of August '87 conducted by SMS Marketing & Research Services, Inc. polled 902 consumers statewide . . . 80% of respondents felt that doctors are forced to pay too much for liability insurance and 70% said laws should be enacted to stem the problem . . . Two-thirds said awards should be limited, ceilings set for emotional or mental suffering, and it should be permissible to pay awards over time. (Ed: Alas! our legislators apparently do not believe their constituents. . . .)

Ten Molokai native Hawaiians spent four weeks eating traditional Hawaiian food . . . The diet project was based on findings that Hawaiians now have more heart problems than other races in Hawaii and was set up by William Connor of the Oregon Health Sciences University . . . Fellow researchers were Richard Blaisell, Helen Petrovich, and Emmett Aluli . . . Funds were provided by the Hawaii Heart Association, the American Heart Association, and the Office of Hawaiian Affairs . . . Dick Blaisdell says the project established the traditional Hawaiian diet as a low-fat, low-sodium diet . . . The Hawaiians, before Capt. Cook, ate foods high in carbohydrates — mostly taro, sweet potatoes, bananas, and breadfruit . . . The primary protein was fish or birds. Except for ali'i, Hawaiians rarely ate pork . . . Salt was used to preserve foods, but most foods were eaten fresh . . . The traditional Hawaiian diet had 12% protein, 18% fat and 70% carbohydrate as compared to today's typical American-Hawaiian diet with its 15% protein, 40% fat and 45% carbohydrate. . . .

The Marimed Foundation, a private nonprofit organization that provides health-care services to the Marshall Islands, is building a 155-foot medical schooner, the *Tole Mour,* which will sail between islands in the Marshalls with a team of doctors and with medical equipment. Fred Pritchard, president of The Queen Emma Foundation, presented a $400,000 check to the Foundation's medical director and co-founder Ilona Higgins . . . The shipboard medical facility will be called "The Queen's Healthcare Center in memory of Dr. Charles S. Judd Jr." Charley was chairman of the Marimed board of trustees . . . (See May issue of the JOURNAL.)

On January 15, Kim Thorburn, Department of Corrections medical director, was saying "Only luck has kept AIDS from breaking out in Hawaii's prison system . . . That's expected to end any day with the appearance of the first AIDS case . . . We are prepared somewhat for a case, but I don't think the administration is fully prepared for the costs — approximately $50,000 per patient." Then, on January 21, Kim announced that Hawaii's prison system had its first case of AIDS — an inmate in his late 20s and an iv drug user . . . "The luck has run out," she said . . . The inmate had entered the prison system in December and had been in OCCC's cell block awaiting trial. . . .

"When the Physicians for Social Responsibility gather in Washington, D.C., March 4 and 5, there'll be a strong Reppun delegation on hand: Dr. J. Fred Reppun of Kaneohe, who is state coordinator; his son Dr. Thomas Reppun, a clinical pathologist at Queen's; and another son Joshua, an innkeeper in San Diego. . . ." (Dave Donnelly's Hawaii).

Miscellany

Patient to doctor: "Doc, something is happening . . . I'm passing odorless gas . . . Is it my gall bladder again?" With this, the patient farted . . . The doctor rushed out of the room and later when he returned, he gave the patient some pills . . . "Here, Mr. Jones, take these pills with your meals and come back in a week so we can check your nose. . . ." (As told by ENT man Walter Young)

Jesus was playing with Moses on an immaculate golf course in Heaven . . . Moses hit a 400-yard drive straight down the fairway, but the ball bounced behind a tree . . . Jesus also hit a 400-yarder, which hooked into a deep pond, but the ball floated on the surface . . .

Jesus took his 6 iron, walked on the water and hit a shot that landed a foot from the cup . . . Moses went up to his ball to survey his dilemma . . . Just then a white dove flew down, picked up the ball, flew over the cup and dropped it in . . . Jesus complained, "Come on, Dad! Play fair!" (As told by avid golfer Bill Dang. . . .)

Jessie Jackson confronted God: "Will there ever be a black president?" God: "Not in your lifetime . . ." Jessie: "I have another question . . . Will there ever be a woman president?" God: "Not in my lifetime." (As told by PHN Louise Tokumura).

Elected, Appointed & Honored

HCMS installed Ronald Peroff as president; Hunky Chun, president-elect; Stephen Wallach, secretary; and Calvin Wong, treasurer . . . John McDonnell was outgoing president . . . (Ed: Ron is an ENT man, and his fellow officers are all cardiologists — which

must mean something . . . Perhaps, it takes a stout heart to run for office these days. . . .)

Orthopod Larry Magnussen of Lihue was inducted as a fellow of the American Academy of Orthopedic Surgeons at the 55th annual meeting in Atlanta, Ga.

Health Tips

Straub ENT man Truett Bennet says:

"Swimmer's Ear: An infection of the skin in the outer ear canal when bacteria-containing water remains trapped in the ear after swimming . . . I always advise against using Q-Tips — they remove the waxy substance that protects the ear . . . For recurring bouts of swimmer's ear, I recommend the use of 'Swim Ear,' non-prescription ear drops that help dry out the ears . . . Or you can use a few drops of a half-and-half solution of white vinegar and alcohol.

Surfer's Ear: Popular term for exostoses of the ear canal . . . The bumps are the result of repeated outer-ear infections . . . If the bumps become too large, they can block the ear canal and interfere with hearing. When this happens, surgery is required . . . The best treatment is prevention — avoid the use of cotton swabs and use ear drops to dry out the ears after swimming or showering."

Miscellany

A young, wealthy woman, recently widowed, lived alone in a mansion near a U.S. Marine training camp. Feeling generous, she decided to invite some young Marine recruits for Christmas dinner. She called the camp's special services officer: "I wish to invite six of your Marine recruits for Christmas dinner . . ." "Yes, madam, that would be nice. . . " "I have only one stipulation," she said, "No Jews. . . ." "Yes, madam, I understand. . . ."

On Christmas day, six Marines arrived in their dress uniforms, ties in place, shoes spit-polished, hair combed . . . Only they were all black . . . "Why, there must be a mistake," gasped the widow . . . "No madam, Capt. Goldberg never makes a mistake," volunteered one of the Marines. . . . (As told by our friend, Beretania tennis pro, Clay Benham)

Scene in a big-city department store near closing time: A sign by the escalator stipulates, "Dogs must be carried." The country bumpkin looks around frantically and mutters, "Hell! Where can I get a dog around here?" (Another Clay Benham contribution.)

The wife of a farmer had taken ill . . . The country doctor referred her to a big-city specialist who did every conceivable test and came up zero . . . He called the husband in: "I can't be sure, but she either has AIDS or Alzheimer's . . . On your way home, drop her off a mile from your home . . . If she makes it home within an hour, don't go to bed with her . . ." (As told by Pat, another tennis playing friend. . . .)

Physicians Speak Up

Arthur Barsky, a psychiatrist at Mass General, writes in the *New England Journal:* "Americans have never been healthier, but they feel worse and worse . . . Our subjective feeling of healthiness and physical well-being has decreased, even though there have been major advances in our actual, objective health status . . . Thus, we live longer, but a greater proportion of our life is spent in ill health . . ." Arthur cites the following factors: (1) "People's fascination with diet, exercise and healthy living means they spend more time thinking about their bodies . . . This erodes their sense of well-being because they are more negative about their health when they dwell on it . . ." (2) The proliferation of do-it-yourself diagnostic kits, health magazines, fat farms and other health products make people more conscious of trivial symptoms . . . (3) People go to the doctor twice as often as they did 50 years ago. They seek help for minor complaints . . . This medicalization of daily life leads people to think that all of their discomforts are curable and they are disappointed when they are not."

Patrick Drone in a diabetes care article in *The Garden Island News* writes, "It is a chilling but valid slogan: 'Give diabetes an inch and it can take a foot.' "

Alan Taniguchi, head of the Hepatitis B Prenatal Program of the State Health Department says, "Parents, with adopted children from Asian and Pacific countries where hepatitis B is very common, should have them screened for the virus, regardless of age.

Health Director John Lewin is recommending that refugees and anyone immigrating from high-risk areas should be screened for infection and vaccinated as a protective measure if their blood tests show they are not infected. Jack has identified hepatitis B as a major health threat in Hawaii because of the state's proximity to Asia and the estimated 40,000 carriers here. . . .

Back before Christmas, Hawaii Ophthalmological Society president Shigemi Sugiki wrote a letter to the editor cautioning parents not to purchase BB guns as Christmas toys . . . "Gun control is a topic of debate for the adults of this country, however, it seems that BB and pellet guns are rarely included in this issue . . . Medical eye doctors know children quite often do play with BB guns, because we have treated young victims of blinding accidents . . . In the spirit of the holiday, we hope that parents will find more suitable toys for their children . . ."

A Little Pat On The Back

The following letter to the *West Hawaii Today* editor caught our attention . . . Elizabeth Marshall of Kailua-Kona wrote: "I awakened on New Year's Day to pouring rain, a feeling of isolation on this island, far from what was once home, and a negative feeling about the future. In my mailbox was a mahalo note with the following message: 'Dr. Marshall. I'm feeling so much better thanks to you. My back is on the mend. I'm thankful to know I'll have a good doctor when we settle here next month. Fondly, Jody Larson.'

"A simple gesture, time spent on giving a little appreciation, on giving recognition and a feeling of usefulness. Perhaps these are the things that make life worthwhile. My depression lifted, my strength increased, my ability to give and to stretch myself just a little more — all changed within a few minutes.

"If we all give a little pat on the back to those around us who keep trying, perhaps the new year will be happier for everyone." (Ed: Yes, Liz . . . We emphathize . . . As physicians, we walk a lonely road and an occasional pat on the back from colleagues, friends, patients or just anyone can make it all worth our effort . . . It is tough playing God . . .)

Oncology Dialogue

A 72-year-old man with invasive bladder Ca had a cystectomy and an ileal conduit done . . . Moderator Kevin Loh turned to radiotherapist Ed Quinlan: "Would you treat?" Ed admitted, "Anything we do at this stage will be disastrous . . ." Kevin asked, "What's the status of pre-op radiation?" Ed: "Ten years ago, there was no question about doing pre-op radiation . . . Then six or seven years ago, the urologists felt they do better with radical surgery and abandoned pre-op radiation . . . Now the radiologists are pushing for chemotherapy while the surgeons are going another route . . . The old rule was 50% recurrence with pre-op radiation . . . Now with Cis-Platinum, there is a 60% response . . . Radiation alone causes hemorrhagic, cystis, proctitis, and bladder contraction . . ." Fellow radiotherapist Vince Brown added, "In the U.S., the way to go is surgery . . . In Europe, the way to go is radiation . . . With a virginal bladder, there is less bladder contraction . . . 'A contracted bladder is better than no bladder at all.' " Urologist Bill Shiraki spoke up: "In the U.S., Dr. Skinner is the proponent of pre-op radiation and some centers still do it. At Harvard they give Cis-Platinum, MTX and do cystectomy . . . In most centers, they feel they do better without pre-op radiation . . . At a recent meeting, they were proposing pre-op Cis-Platinum plus radiation" . . . Kevin added, "With Cis-Platinum in high doses and surgery, the response rate is 50 to 60% in those centers. . . ."

Miscellany

A woman heard that miniskirts were on the way back . . . She searched through her closet and found a miniskirt she used to wear . . . She tried it on . . . Then a dilemma . . . She didn't know what to do with her other leg . . . (Paul Harvey)

What's the difference between a Texas oilman and a pigeon? A pigeon can still make a deposit on a Mercedes . . . (Anonymous).

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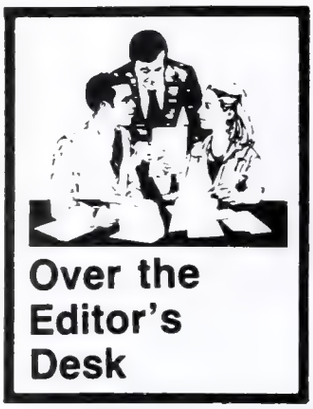
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Aloha United Way



STEPHEN R.P.K. BRADY, MD

NEW LOCAL FOOD GUIDE—If you're interested in eating a healthy diet, you'll want to get a free copy of a new guide to fat and fiber contents of local foods from the Cancer Information Service (CIS). Eating foods high in fiber and low in fat may help you lower your risk of cancer. With this guide, you'll be able to select Island fruits, vegetables or fish that are low in fat or rich in fiber. Included are Island favorites such as papayas, bamboo shoots and mahimahi.

To receive this guide, as well as a booklet full of eating tips, call the CIS at 524-1234, Monday through Friday between 8:30 a.m. and 4:30 p.m. Neighbor Island residents can call collect. The companion booklet, "Diet, Nutrition & Cancer Prevention," has cooking tips, a listing of fat and fiber for many foods, as well as descriptions of the health benefits of individual foods. Parents will find the booklet particularly useful when shopping and preparing meals for their families.

The CIS is a program of the University of Hawaii's Cancer Research Center and is funded by the National Cancer Institute.

THE WAIKIKI HEALTH CENTER COMMENDS HAWAII MEDICAL ASSOCIATION FOR DONATIONS TO THE "HEALTH CARE FOR THE HOMELESS" PROJECT—In a letter to the HMA, project coordinator Eric Lee wrote: "The Board of Directors and staff of Waikiki Health Center thank you for your canned-goods drive for the 'Health Care for the Homeless' project, otherwise known as 'Care-a-Van.' We think it's fantastic that you have agreed to help the community by your contribution.

"The goal of this greatly needed project is to link homeless people with exisiting social services and integrate them into society. In addition to coordinating (the) project, the (Center) is also a resource for any homeless people you come in contact with.

"Thanks again for your support of and interest in our project. If I can be of further service, or if you have any questions or suggestions, please call me at 922-4787."

THE HONOLULU MEDICAL GROUP CHOSEN AS ALTERNATIVE AIDS TESTING SITE—A representative from the Department of Health will provide free, anonymous, number-only (no names), Human Immunodeficiency Virus (HIV) counseling and testing at The Honolulu Medical Group, 550 S. Beretania St. By opening alternative testing sites, the Department hopes to increase awareness and offer counseling to antibody-positive individuals to avoid exposing others. Information on how to avoid contracting the virus is also available.

Testing will be conducted every Wednesday and Friday, 9 to 11:30 a.m. To schedule an appointment, call 537-2211, ext. 444. Anyone interested in testing but preferring a different site can call the Department of Health at 735-5305.

LOCAL PHYSICIAN RECEIVES NATIONAL AWARD—WASHINGTON, D.C.—Dr. Fred Reppun, a longtime Honolulu physician and editor of the *Hawaii Medical Journal,* received the Broad Street Pump Award from Physicians for Social Responsibility (PSR) at

(Continued on page 298)



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OTED *(Continued from page 296)*

its National Meeting in Washington, D.C., on March 5, 1988. This award recognizes an outstanding individual commitment to the prevention of nuclear war.

Reppun was honored for his efforts over the years to rally local physicians to the cause of PSR — to educate the residents of the Aloha State about the dangers of a continued nuclear arms race and non-survivability of nuclear war, and to involve them in working toward ending the nuclear arms race.

In 1981, Reppun took a major role in organizing PSR/Hawaii, which started with only 12 members. Today the chapter has more than 250 members — almost 10% of the state's physicians.

Reppun's nuclear war education efforts have included the production of the video "Puhi Pau," which means "the end of the breath of life." The film, which depicts the possible effects of a nuclear explosion over Hawaii, has been seen by high school students and civic organizations throughout the state and nation.

In 1984, Reppun began PeaceSat, a bimonthly satellite conference that connects peace activists throughout the Pacific Basin. This effort led to an International Physicians for the Prevention of Nuclear War (IPPNW) symposium in New Zealand that focused on global security versus national security.

The Broad Street Pump Award is presented annually to an activist from each of PSR's seven regions. The pump owes its fame to anesthesiologist John Snow, who helped curtail a cholera outbreak in London in the middle of the 19th century by identifying the Broad Street water pump as the source of the disease, and notifying city officials of his finding.

HEALTH CARE ADMINISTRATOR NAMED—Earl Motooka has been named administrator of the Health Care Administration Division by Department of Human Services Director Winona E. Rubin.

Motooka began his career with the department in 1965 serving first as a social worker in the Medical Social Work Unit of the Public Welfare Division (PWD). Later his work covered a wide range of activities that included handling casework in foster care, adoptions, and children's protective services. His supervisory appointments in the Public Welfare Division covered medical social work, income maintenance, and medical welfare before he became acting Medicaid director in 1979 and director in 1982.

When the Health Care Administration became a separate division within the department in 1986, Motooka served as assistant division administrator until being named acting administrator in 1987.

Born in Honolulu and currently a Kaneohe resident, Motooka spent four years with the U.S. Air Force. He holds a bachelor's degree in sociology and a master's degree in social work from the University of Hawaii.

PHILLIP F. MOON NAMED DIRECTOR OF LEGAL SERVICES FOR QUEEN'S—Phillip F. Moon has been appointed director of legal services for The Queen's Health Systems.

Moon was previously in private practice and represented Queen's in various capacities. His areas of expertise include general liability, medicare/medicaid rules, third-party reimbursement, contracts, hospital administration and medical staff privileges and discipline.

A resident of Hawaii since 1975, he has also served as deputy attorney general with the State of Hawaii specializing in health and hospital law, and was associated with the law firm of Davis, Reid & Richards.

Born in San Francisco, Moon is a graduate of the University of California at Los Angeles and the University of San Francisco School of Law.

IMPACT OF AGGRESSIVE BLOOD PRESSURE CONTROL PERSISTS—Patients in a standardized, intensive hypertension detection and treatment program do better longer in terms of blood pressure control and mortality than patients treated by community sources of medical care, says a study in the *Journal of the American Medical Association.* The report describes results of the Hypertension Detection and Follow-Up Program, a blood pressure control trial involving 11,000 hypertensive patients and run by the National Heart, Lung, and Blood Institute in Bethesda, Md. It was previously reported that after five years, patients in systematic, intensive treatment (called Stepped Care, or SC) had 17% lower mortality than those treated through community medical sources (Referred Care, or RC). SC patients were treated with a standardized drug protocol and followed rigorously; RC patients received a less intensive, community standard of treatment. Now the authors say the reductions in blood pressure and mortality (both overall and cardiovascular disease-related) seen in SC patients at five years persist even longer (as long as 8.3 years), and in all major groups of

hypertensive adults studied, despite discontinuation of the formal SC program. These results underscore the five-year findings "that the systematic effective management of hypertension has a great potential for reducing mortality for the large numbers of people with high blood pressure in the population, including the millions with 'mild' hypertension," the authors say.

FREQUENT ANTACID USERS PREVALENT, SAYS GALLUP SURVEY; MAY BE IGNORING ILLNESS WARNING, NOTES PHYSICIAN—NEW YORK—More than 61 million Americans — 44% of the adult population — suffer heartburn monthly; and one out of eight (or 18 million adults) take indigestion aids (including antacids) two or more times a week, according to "Heartburn Across America," a nationwide Gallup survey of 1,000 adults.

"Frequent users of indigestion aids — those who take them two or more times a week — are more often age 50 years and older," said Neil Upmeyer, research director of the Gallup Organization at a press briefing. One out of every five adults 50 years or over (22%) is a frequent user, compared to one in 10 of the younger age group (9%).

Although an overwhelming majority (86%) of adults polled consider physicians a reliable source of information on heartburn, most chronic users of indigestion aids (59%) said they did not plan to consult physicians about heartburn.

"Anyone who has heartburn more than once a week should ask a doctor about it and discuss the best ways of relieving the condition," advised Harris R. Clearfield, MD, of Hahnemann University School of Medicine, an expert in gastroenterology.

Underscoring the seriousness of chronic heartburn, Clearfield pointed out that chronic heartburn could lead to:

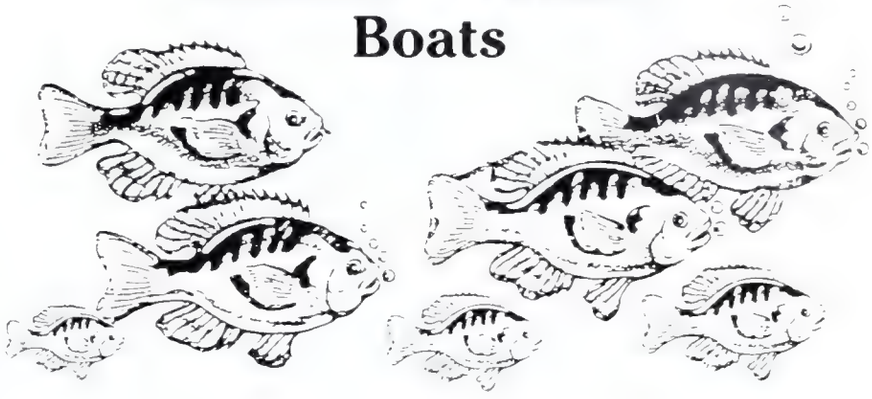
- irritation and eventual scarring and narrowing of the esophagus;
- an aggravation of bronchial asthma;
- unexplained night-time cough and bronchitis, due to lung aspiration of refluxed stomach contents; and
- laryngitis and possible ulceration of the throat.

"Heartburn Across America" demonstrated that heartburn is commonly misunderstood and misperceived," Clearfield said. He noted that almost one in eight adults, or 17 million people, did not consider regular heartburn to be a serious problem.

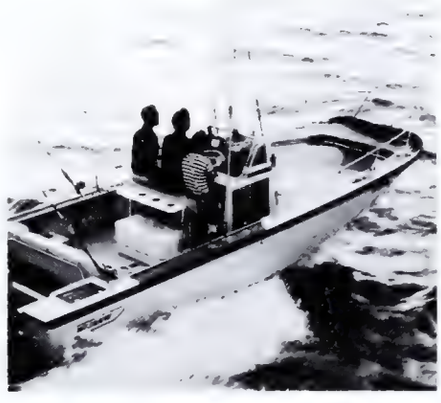
"Many respondents identified several symptoms, such as nausea and difficult

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OTED *(Continued from page 299)*

breathing, as heartburn, and presumably are medicating themselves as a result," Clearfield said. "Unfortunately, these symptoms have nothing to do with heartburn and require proper diagnosis and treatment."

Dinner was the single meal most closely associated with heartburn in "Heartburn Across America;" also, 35% of frequent users of indigestion aids indicated they go to sleep within two or three hours after dinner as compared to only 6% of infrequent indigestion aids users.

"Sleeping shortly after a meal may worsen the severity of heartburn symptoms," Clearfield pointed out. "Most Americans consume almost 70% of their daily calories at dinner; lying down afterwards induces the acidified stomach contents to move up the esophagus, causing heartburn."

Upmeyer of Gallup revealed during the meeting that people over 50 years of age are more likely than younger adults to suffer heartburn symptoms three or more times a month.

FIBER MAY BE MORE COST-EFFECTIVE THAN DRUGS TO CONTROL CHOLESTEROL, STUDY SAYS—CHICAGO—The use of soluble fibers such as oat bran may be a more cost-effective public health approach to treating patients with high blood cholesterol than the use of drugs, a report in the *Journal of the American Medical Association* concludes.

In a cost-effectiveness analysis of three alternative agents for lowering serum cholesterol in patients whose cholesterol levels cannot be controlled by diet alone, the authors, Bruce P. Kinosian, MD, and John M. Eisenberg, MD, MBA, of the University of Pennsylvania, Philadelphia, and the University of Maryland, Baltimore, suggest that the social cost of treating hypercholesterolemia to prevent coronary artery disease is not as high as previously estimated.

The authors estimated the cost-effectiveness of treating hypercholesterolemic men (serum cholesterol levels above 260 mg/dl) with a bile-acid binding resin (cholestyramine resin or colestipol) or a *clinically equivalent quantity of* soluble fiber (oat bran) for seven years. Their simulation of the effectiveness of these regimens was based on findings from the Lipid Research Clinics Coronary Primary Prevention Trial (CPPT) that demonstrated a 2% reduction in heart attack risk for every 1% reduction in cholesterol level.

They also estimate the total cost of treating the 1,900 men in the CPPT with

(Continued on page 302)

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OTED *(Continued from page 300)*

each of the three agents. This was weighed against the benefits of lowering cholesterol levels — including the reduction in deaths from coronary artery disease, heart attacks, coronary artery bypass surgery, and other adverse outcomes associated with hypercholesterolemia. The results are expressed as the cost of each year added to a patient's lifetime for each of the three treatments.

The study's findings suggest that the cost per year of life saved (YOLS) is $117,400 for cholestyramine resin, $70,900 for colestipol, and $17,800 for oat bran. These estimates are based on annual costs of $1,442, $879, and $249 for the respective regimens, including the cost of regular medical supervision. These are also based on the cost of using cholestyramine resin and colestipol packets, as were used in the CPPT. Use of bulk drug reduces the cost per YOLS to $65,100 for cholestyramine resin and $63,900 for colestipol. Focusing on high risk groups would also be more cost-effective: "Targeting colestipol treatment only to smokers has a cost per YOLS of $47,010," the authors report.

Another report in *JAMA*, sponsored by the American Heart Association, recommends that physicians limit highly invasive procedures, such as coronary angiography, to coronary artery disease patients who are at the highest risk of myocardial infarctions — and who, therefore, have the greatest chance of benefiting from a coronary artery bypass or coronary angioplasty. The author, Melvin D. Cheitlin, MD, of the University of California-San Francisco, discusses the diagnostic procedures to use to identify those patients whose risk of further heart damage justifies more invasive diagnostic procedures and coronary revascularization.

Cheitlin recommends that physicians assess a patient's risk of cardiac damage by first using the patient's history, physical examination, periodic treadmill testing, and other non-invasive evaluations of heart function, including echocardiography and radioisotope angiography. This conservative approach will identify patients with large areas of heart muscle at risk of destruction from a future heart attack — the patients for whom coronary angiography is justified. Because coronary atherosclerosis progresses with time, Cheitlin says risk assessment should be repeated periodically. Although the interval depends on changes in the patient's clinical condition, he recommends that the assessment be repeated every two to three years in absence of any clinical change.

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Go easy on your heart and start cutting back on foods that are high in saturated fat and cholesterol. The change'll do you good.



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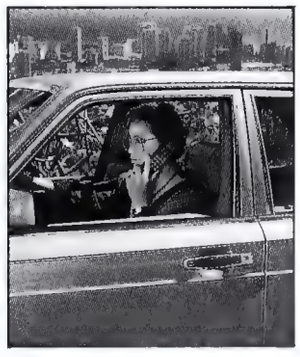
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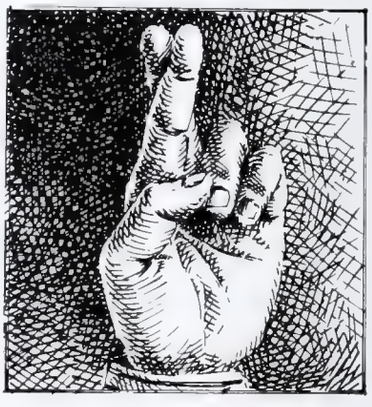


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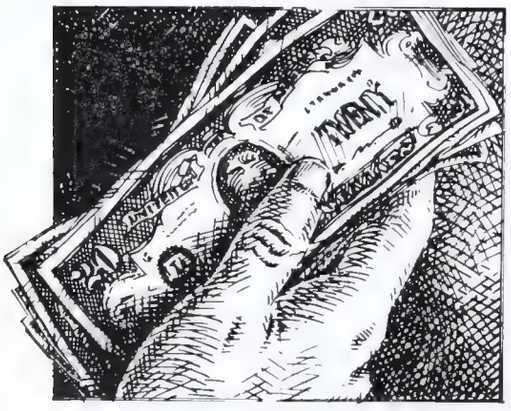
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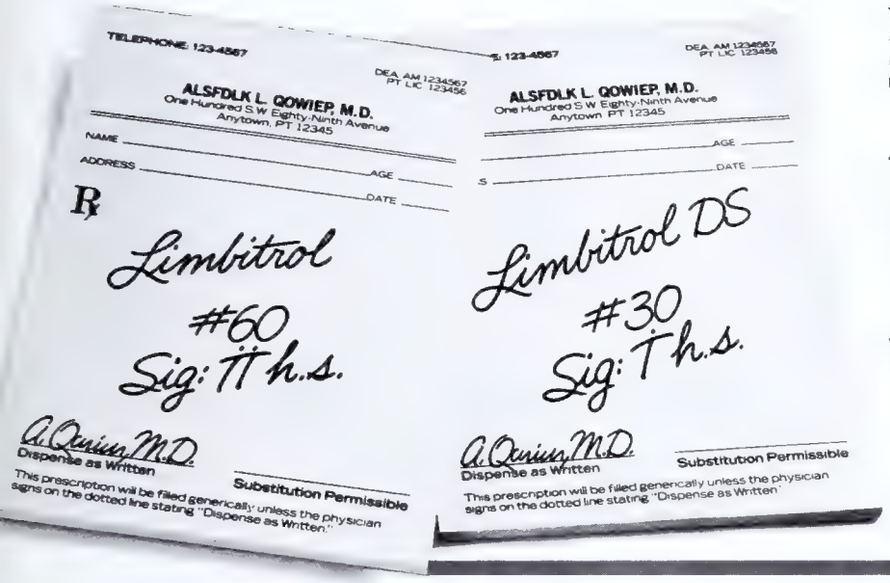
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References: **1.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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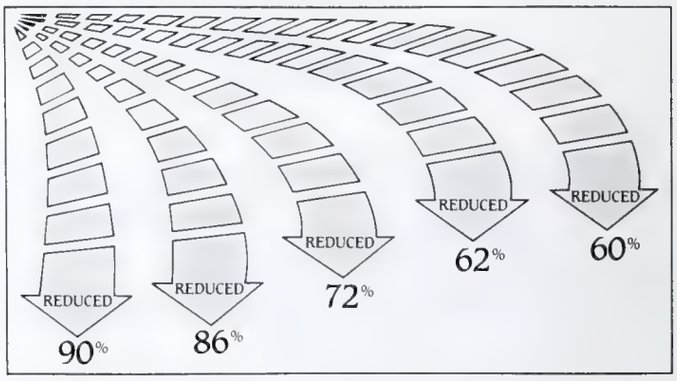
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Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

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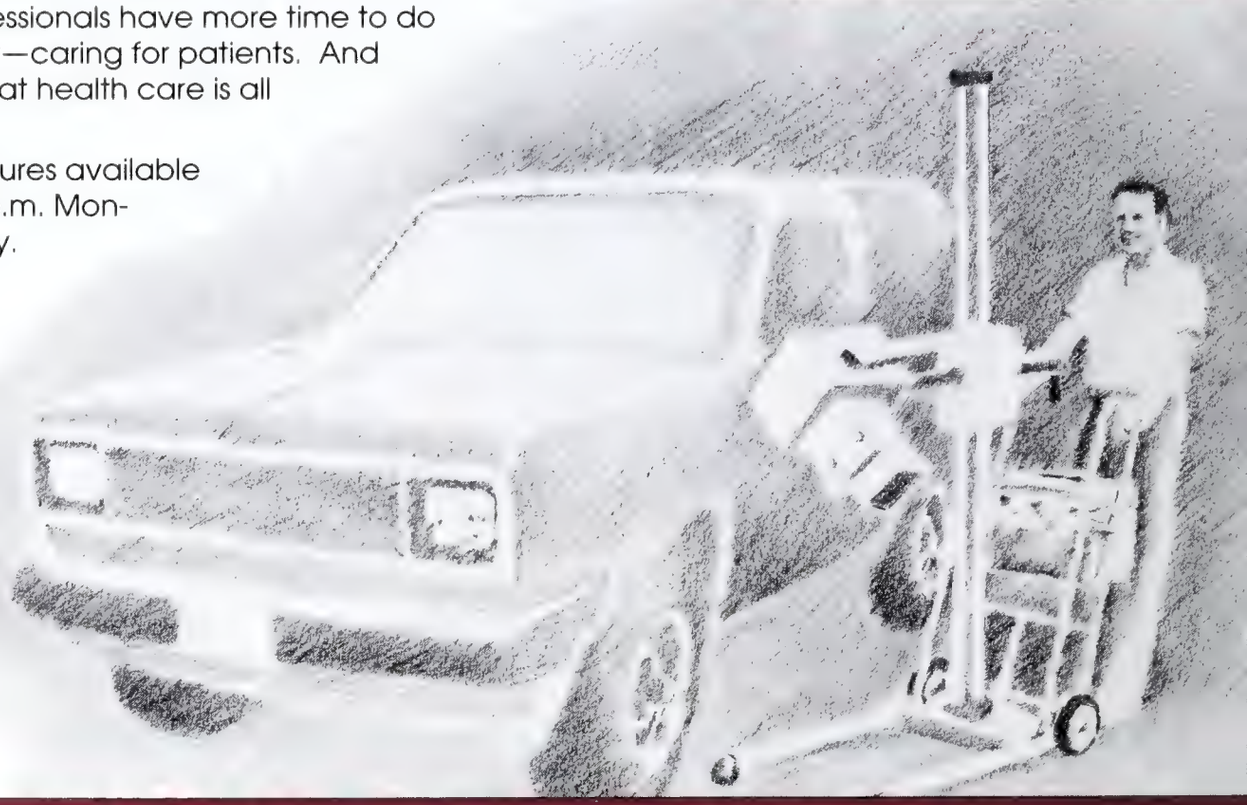
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ARMY RESERVE MEDICAL PROFILE NO.7





Soldier being examined for effects of high-altitude cerebral edema.

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

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Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer In most patients, the ulcer will heal within four weeks

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer The consequences of continuous therapy with Axid for longer than one year are not known

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations) The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers

Pediatric Use—Safety and effectiveness in children have not been established

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups Age alone may not be an important factor in the disposition of nizatidine Elderly patients may have reduced renal function

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo Rare reports of gynecomastia occurred

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported

Overdosage: There is little clinical experience with overdosage of Axid in humans If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy Renal dialysis for four to six hours increased plasma clearance by approximately 84%

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively PV 2091 AMP [041288]

Axid® (nizatidine, Lilly)

Axid® (nizatidine, Lilly)

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And Now, Brought to You by the Same People Who Designed the Edsel . . .

An excellent drama was played on television not long ago in which the story line centered around the dealing and double dealing of espionage, secret missions, moles, political assassination, and all the complex maneuverings of intelligence agencies. When the old-timer, played by John Houseman, was asked if he missed the "old days" before the OSS became the CIA, he replied, "No, but I do miss the clarity."

For those of us old enough to remember the pre-Medicare days, the same might be said for our profession. In those unfettered times the patient was entirely his own boss, and his doctor was independent. The doctor worked strictly for the patient and was rewarded appropriately for his service. Fees were often adjusted downward to meet a patient's ability to pay.

In 1965 when the Social Security Administration began to pay medical bills (guns and butter in the lexicon of LBJ's war on poverty), things began to grow hazy. In the 22 years since then, financial definition has been almost completely lost. We labored through "usual and customary" to use or not to use, a relative value schedule, Nixon's fee freeze, the hospital headache of DRGs, and now participation or nonparticipation; and just what does MAAC mean anyway?

The wee minds hiding behind the green eye shades in HCFA have composed a formula that defies interpretation by all, including by the local SSA office. If you like words, you can call it obfuscated or abstruse, recondite or nebulous. Or you might call it confusing or weird, unintelligible or indecipherable. Mostly, one can call it stupid. The entire maximum allowable (MAAC) scenario is nothing more than an additional HCFA bludgeon, clumsily and carelessly designed to force doctors to participate in the latest dreamy accountant's reimbursement scheme. It has confused doctors into billing violations (HCFA letters), yet local authorities have been unable to advise appropriate corrections.

Roe vs. Wade was another smoke bomb tossed into our medical world. Previously, doctors knew what to do about pregnancy. Unborn babies were kept alive; pending mothers were supported; the entire thrust of all medical care was toward the compassionate preservation of life. The supreme court did not merely upset the prohibition against "criminal" abortion; it truly shook the foundation of medical ethics. Suddenly, doctors were told by legal authority that we must discard the ancient hippocratic interdiction and allow abortion-for-convenience. (Before this JOURNAL is deluged with angry messages about pro-choice, please recognize that I am writing purely from a medical/ethical historical perspective.) Furthermore, it made politicians, clergymen, ethicists and philosophers, as well as medical experts, join in a passionate debate about when life begins. Talk about being muddy, befuddled, perplexed and confused!

Medical ethics absorbed another kick in the vital parts in the mid-1970s when we were told by the federal government that medicine is just a trade, and that advertising is therefore a good thing. Soon hospitals, clinics, and even more individual practitioners engaged marketing firms to broadcast their virtues. The delighted media began sucking up some of the 10.5% of the gross national product expended on medical care. So now, we view physicians on the tube sounding like "lovable Art Fern" on the "Tonight Show." Newspapers and magazines feature extravagant layouts of "caring" institutions with modern facilities and advanced technology, together with "caring" nurses, doctors, and even smiling nuns.

Despite the loss of definition, and the invasion of the corpus medicinensis by government, insurance carriers, Madison Avenue, contractors, accountants, attorneys and politicians, a stabilizing fact remains. Along with that hard-earned doctorate of medicine, there abides in us an obligation to professionalism. Irrespective of the plethora of dark clouds that dim the light of truth, the perpetual meddling of outside forces, the vague pathway and the uncertainty of tomorrow, each of us took an oath to improve our skills and to serve our patients with the utmost ability.

Quality remains — and always will. And you can take that to the bank!

Russell T. Stodd, MD
AMA Delegate

One Hospital's Dilemma

We have a correspondent, a registered nurse who works at a major city hospital on the West Coast. The following is taken from her account of a hospital's financial and staffing dilemma; it may be reflected similarly here in Hawaii, but we hope not.

This was the situation at a major hospital in a city somewhat larger than Honolulu. It is licensed for 423 beds but operated at full capacity with 400 beds. It runs mostly at 100% occupancy and even has patients filling 405 beds.

Up until recently, its financial condition was in the black. However, between July 1987 and January 1988 it was losing $2.1 million! The reason?

Fifty-three percent of its admissions consisted of patients NOT covered by either private or government insurance, i.e., "without any money." Many of these were dumped on this hospital by other hospitals in the area. This particular hospital prided itself and was known as being excellent in terms of patient care, with modern, sophisticated facilities, and it is a large "cancer treatment center." It is also a major trauma and emergency care center, but it is not the only one — there are five other trauma centers in the county, plus many emergency units, one of the former being very nearby.

(Continued)

What has suddenly happened is that this hospital has been swamped with the "underfunded" — underfunded by the state Medi-Cal and state-supported county medical services. As a result, its one-day surgery appointments have had to be canceled because the ASF bed had been pre-empted by a trauma case or a medical emergency "dumped" on it during the night before. The elective "pay" patient's bed was taken by a non-pay "poor" patient. Because the hospital is running at full capacity most of the time, it has no "empty" beds to use for the paying patient, no reserve to fall back on.

What's more distressing is that the oncology patients who have appointments for the in-and-out, same-day chemotherapy beds, have had to wait for up to six hours until a bed opens, or have the treatment canceled.

That's the bed-situation dilemma. What are the hospital's plans for a way to reverse a projected $6.2 million loss in the fiscal year?

It has announced that it has to refuse admissions from other hospitals unless the patient has private or government insurance or can make a large deposit in cash. It may also have to divert some trauma and emergency cases to elsewhere. Finally, lacking such success with solutions, it may have to revert to being a "county charity hospital," which it once was, over 20 years ago.

The hospital has one other recourse: To expand "pavilionization."

It already has made use of making a few of its floors into posh pavilions in which patients pay for every extra amenity and service. It has such an 18-bed section that has underwritten the expense of the whole hospital to the tune of 20% so far; the plan is to open an additional 23-bed section. These would help support the care of the indigent elsewhere in the hospital.

However, comes a problem with staffing. Such pavilions, to maintain their reputation for "high-class care," must be staffed by "super nurses." Because the hospital admittedly has a lot of what has been criticized as "deadwood" personnel, some with many years of service, and because of union rules, the hospital has resorted to laying off *all* personnel, then hoping that the "super nurses" would reapply and be rehired, while the less well-qualified ones would not be rehired.

What a way to go! It all smacks of a tiered system of medical care, one level of quality for those who have money or coverage and undoubtedly a lesser level of quality care for the poor and "underfunded." We have been reading about that threatened double-standard as a result of "dumping" before, but this instance makes the problem very specific.

J.I. Frederick Reppun, MD
Editor



Your editorial, "A Reprise on Referrals," in the April '88 issue deserves a response.

For no good reason, probably only an emotional one, I don't like PCP as an acronym for what we used to label the LMD — the Local Medical Doctor. PCP sounds too much like a contaminant in our drinking water, and I don't like doctors being referred to as (Healthcare) Providers! I still like LMD.

Even though I started out using it as a derogatory phrase when I was in the big referral centers, in 15 years of practice as an urologist here, I have learned that you guys (general practitioners or family physicians) are the backbone of real medical practice as we knew it when we grew up 50 years ago and, despite Medicare, DRGs, PPO, HMOs and the like, should be today.

When I recall the MD who made housecalls, delivered babies, did my spinal tap when I had polio in '39, fixed my friend's chronically dislocating shoulder, tried to talk my parents out of having the professor at Columbia schedule my appendectomy in two weeks for chronic appendicitis, etc., I really don't mean to ignore you guys, and do appreciate being jacked up when I forget!!

Look at how few really family docs we have! We need more of you!

As for having the LMD's concurring signature on the consent form: Not a bad idea, except I would rather see it in the body of the chart — if only to keep the LMD away from the lawyers.

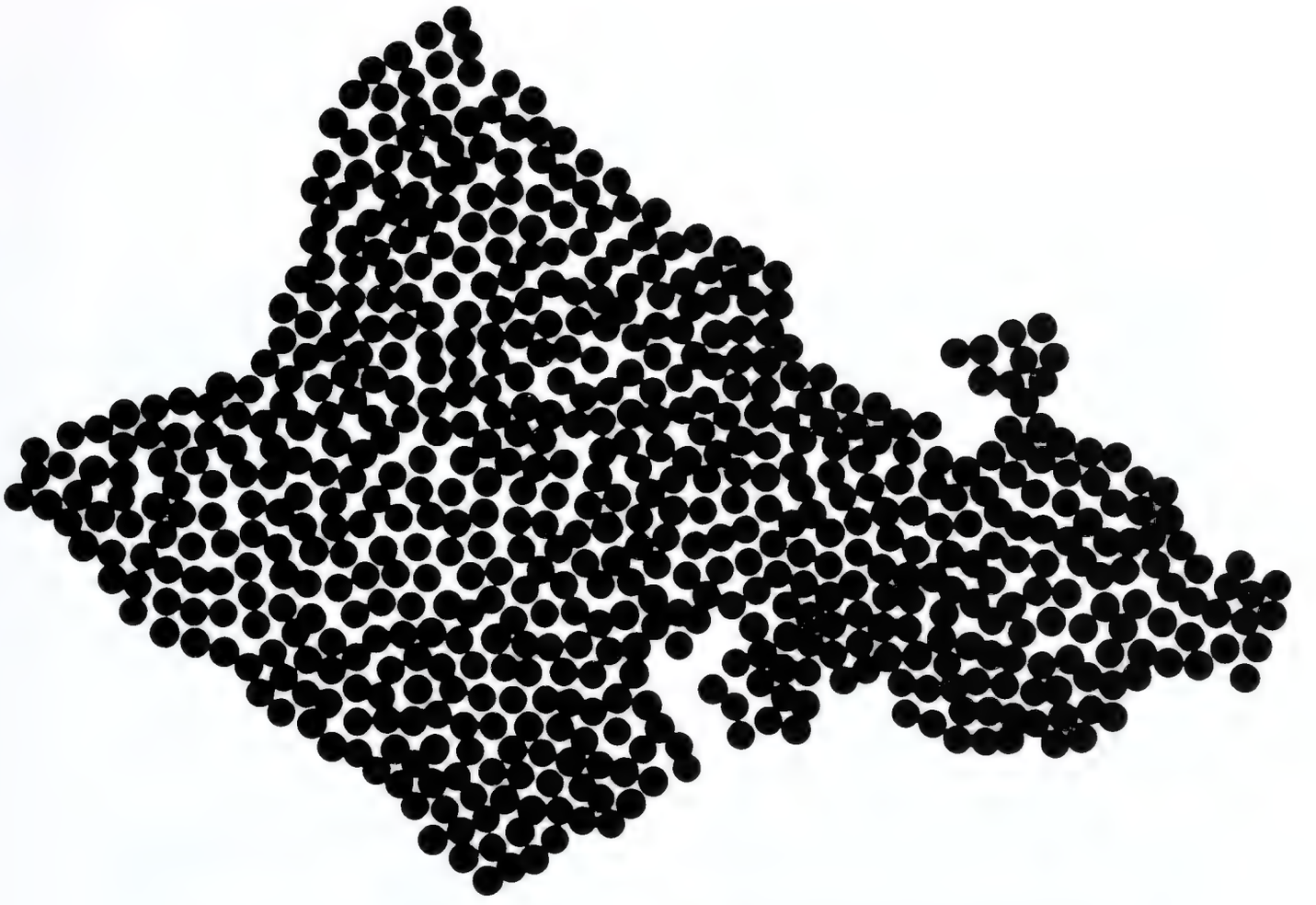
Frank "Pete" Ceccarelli, MD
Kailua/Oahu

The Editor Responds:

Pete, thanks for the kudos to the few of us remaining GPs, and to the new breed of FPs that are providing good primary care to the families in our community. Unfortunately, they are being precluded from delivering babies or excising the vermiform appendix any more, for one reason or another, the main reason being that there are so many of you highly skilled specialists around to whom self-diagnosing patients gravitate.

LMD is truly backwater, ancient! How about PMD — the patient's Private Medical Doctor, otherwise known as the patient's advocate who steers him through the labyrinth that all "you guys" devise in hospitals? I agree: PCP kowtows to the feds' "Health Care Provider" terminology.

—J.I. Frederick Reppun, MD



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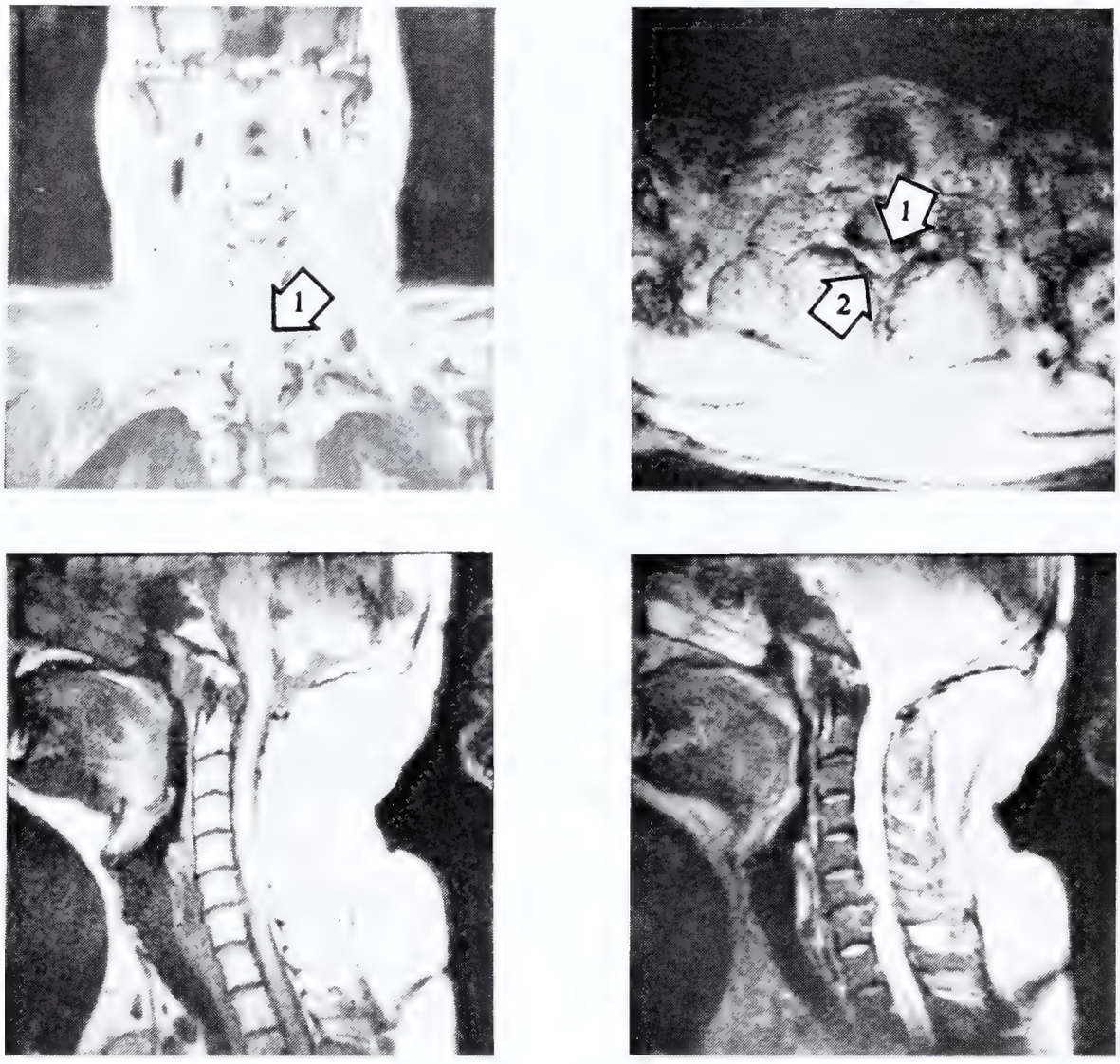
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Beyond the call

MRI CASE OF THE MONTH

POSTERIOR CERVICAL DISC HERNIATION

Clinical Information: This 35-year-old male presents with a history of neck pain and narrowing of the C6-7 disc on plain radiographs of the cervical spine.



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: Images taken in the lateral, axial and oblique coronal planes show a very large posterior C6-7 disc herniation (#1). The cord is displaced to the right (#2). At the time of surgery, the protruding disc material was removed and the cord returned to its normal position and size.

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Laryngoplasty for Vocal Cord Medialization

Ronald P. Peroff, MD*

Vocal cord paralysis may result from many causes: Peripheral neuritis resulting in paralysis may be caused by alcoholism, influenza, acute infectious disease, syphilis, diphtheria, typhoid fever or drug poisoning by lead or arsenic.

It might result from lesions involving the base of the skull or encroaching on the jugular foramen such as tumors, including chemodectomas, benign or malignant salivary gland tumors, or metastatic tumor. It may occur as the result of cranial trauma, brain tumor, bulbar lesions of poliomyelitis, multiple sclerosis, syringomyelia, myasthenia gravis, Friedreich's ataxia, cerebrovascular hemorrhage, or thrombosis. The condition has been seen as a complication of acromegaly.

Involvement of the recurrent laryngeal nerve by malignant disease of the thyroid gland, mediastinal tumor, carcinoma of the esophagus, enlarged heart, aortic aneurysm, tuberculosis or syphilitic lesions and rarely, benign enlargements of the thyroid gland may cause vocal cord paralysis.

Vocal cord paralysis has been reported in 0.4% of patients with adnomatous goiter and in 15% with malignant processes of the thyroid gland. It may result from trauma secondary to neck surgery, especially thyroid surgery, mediastinal or thoracic surgery. Injuries to the neck or larynx may cause it. Fixation of the arytenoid cartilage at the cricoarytenoid joint may occur in some instances from specific causes such as arthritis and in others by infections such as blastomycosis, tuberculosis, or by direct invasion by malignant disease. It has been reported that toxic and idiopathic causes of vocal cord paralysis represent more than one-half of the cases.

If a paralyzed vocal cord assumes a lateral position, the normally functioning vocal cord on the opposite side cannot cross the midline and make contact with the paralyzed cord. This produces hoarseness or breathiness, a weak voice, an inefficient cough reflex and a tendency for aspiration of fluids during swallowing.

Several operations have been developed in the past that involved opening into the larynx itself and introducing a material such as bone, cartilage or a muscle flap between the inner wall or lamina of the thyroid cartilage and the inner perichondrium lateral to the paralyzed vocal cord. More recently, displacement of the laterally positioned vocal cord toward the midline has been attempted, by injection of suspended bone dust, cartilage, tantalum, Silastic or Teflon through direct or indirect visualization of the vocal cords. Teflon has been the substance of choice for intracordal injections up to the present time.

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A New Procedure

Laryngoplasty for vocal cord medialization, or phono-surgery, was described by Ishiki in 1968 but has not gained popularity in the United States to date. The operation is performed under local anesthesia through the neck. The side of the larynx to be medialized is bared and specific measurements are outlined on the thyroid ala opposite the vocal cord. A rectangular window is cut in the ala and this window is dislocated medially, in turn pushing the vocal cord toward the midline. By palpating along this displaced piece of cartilage and/or bone, one can determine where the optimum displacement is for each individual patient, that is, one "fine tunes" the vocal cord. Then a piece of Silastic is whittled with a scalpel to fit the individual patient's window in order to maintain the inward displacement of the cartilage, which in turn pushes and holds the vocal cord medially to bring the paralyzed cord closer to the normal one. The piece of Silastic is slipped into place into the holding position. Further refinements in adjustment can be obtained by sliding the Silastic forward or backward in order to find which position results in the best voice. Once this is determined, the Silastic is left in place and the wound closed in layers. The nasopharyngolaryngoscope can be used to examine the larynx to reassure the surgeon as to the new position of the vocal cord and the approximation of the opposite cord.

Injection of Teflon into the lateral position of the vocal cord has its limitations because it is difficult to be precise about the amount of Teflon needed and the resulting voice quality is difficult to predict. It is an irreversible procedure and cannot be performed on a mobile cord because it may "freeze" or scar the vocal cord and immobilize it completelly. On the other hand, laryngoplasty with vocal cord medialization is performed under local anesthesia and the vocal cord is "fine tuned" like a piano string. It can be performed on a mobile vocal cord and it is probably reversible, i.e., the Silastic implant can be removed later if need be.

Case Report

Laryngoplasty was performed for the first time in Hawaii on a 56-year-old Hawaiian man who was found to have a right neck mass in September, 1985. Exploration of the tumor mass in November, 1985, revealed a metastatic papillary adnocarcinoma. Subsequently, total excision of the left lobe was carried out and a subtotal lobectomy on the right; the isthmus was also removed. The impression was that the patient had a papillary thyroid carcinoma of the left lobe and a large metastatic lesion of the right neck.

In January, 1986 the patient was given 29 mCi of radioactive 131 I and in mid-July 150 mCi. By the end of July, 1987, he was found to have a recurrent tumor mass in the left neck in the supraclavicular area just behind the sternocleidomastoid muscle. At surgery, this tumor mass was about 6 cm in its greatest

(Continued on page 345)

Paul W. Gebauer: Hawaii's Illustrious Thoracic Surgeon

From time to time, I see an unassuming, congenial colleague, now "retired," at the Waialae Country Club. He is the picture of a composed individual, completely at peace with himself. It is alleged that doctors have more problems than members of other professions on retirement, often feeling completely lost and frustrated. This does not appear to be true in Dr. Paul W. Gebauer's case. His mind is constantly active and with some prodding, one can succeed in getting him to reminisce about some of his past accomplishments. He's a doer, a prolific writer, an innovative and dynamic person, constantly thinking of ways to do things better and more easily. What's more, he has the talent to translate those ideas into efficient mechanical devices.

Paul William Gebauer graduated from Western Reserve University Medical School, Cleveland, Ohio, in 1933. He trained at the Cleveland City Hospital from 1934 through 1938. From 1939 through 1941 he served on the surgical staff of the Thoracic Surgery Department of St. Lukes Hospital, as well as at other hospitals in the Cleveland area. During this period, his inventive skills were already manifest. He developed a double-barrel, latex catheter[1] and, later, a twin spirometer[2] for bronchospirometry. Incidentally, he patented these and assigned the rights to B.F. Goodrich Rubber Co., Akron, Ohio, for a consideration of $1! The upper-lobe bronchi were always "blind spots" for bronchoscopists. He developed a stainless steel mirror to help that situation substantially.[3]

Shortly after World War II began, Jan. 10, 1942, he went into military service and was on the first convoy to go overseas to the Pacific Theatre. He finished his tour of duty in 1945 and came to Hawaii in 1946 as the thoracic surgeon for Leahi Hospital. However, case demands in other local hospitals also required his services. He might have been labeled as the energetic, peripatetic thoracic surgeon, "always on the move."

In the 1950s, he was already widely known in the thoracic surgery circles for the work he did on bronchial surgery. He devised wire-supported, dermal grafts that were used to fill the deficit created in the process of resection and anastomosis to relieve bronchial stenosis.[4,5] Prior to and into the 1950s, this was a relatively common and difficult problem caused by tuberculosis.[4,5,6,7,8,9,10] He was recognized as a "pioneer in tracheobronchial surgery" by the famous thoracic surgeon Evarts A. Graham, MD. (Graham did the first successful pneumonectomy for lung cancer in early 1933[11] and was editor of the *Annual Year Book of Surgery* at the time of his untimely death in 1956.)

From the late 1950s and into the mid-1960s, Gebauer became involved in cardiac surgery. There was worldwide interest in developing open-heart surgery. A staggering list of pioneers in this field soon appeared.[12] Some of them got public recognition because of the widespread interest created in part by the active involvement of the news media pursuing progress in this field. In the initial phases, things were, as expected, mostly hard work with abundant frustrations, both technical and medical. At the same time, everyone was competing for the limited funds available for research. Exasperated by the situation, Willem J. Kolff, MD, (renowned for his pioneering work on the rotating drum, and later, twin-coil artificial kidney), then working on the open-heart project at Cleveland Clinic, said in 1959: "If even 20% of the money spent on brassiere advertisements were spent on open-heart research, human heart transplantation would become a reality within the year!"[13]

Hawaii surgeons were no exception in the effort to develop the capability to do open-heart surgery. There were a number of heart surgery teams working mainly at The Queen's Hospital in the beginning, and later at St. Francis Hospital. It is difficult to appreciate fully the complexity of the problems facing all pioneer open-heart teams as they worked feverishly to resolve them.[14,15,16,17,18] There were not only mechanical and logistical problems but also the ponderous, potentially fatal, physiological considerations created by the procedure of bypassing the heart. They needed to assemble various components of the equipment and even improvise certain parts. The bypass pump selected to maintain circulation while the heart was stopped was the "roller tube" type. This was a popular device that was established as dependable and efficient in the artificial kidney procedure, with minimal damage to the blood cells. Oxygenation was accomplished by several mechanisms such as the bubble, screen, membrane, and disc oxygenators.[19,20,21,22,23] Micro-air embolism, defibrination, and denaturation of blood were some of the complications encountered.[18,23] Overoxygenation resulted in sudden fatality 10 to 12 hours after perfusion.[14,24] The stopped heart sometimes developed arrhythmias and heart block in the postoperative period because of disturbed metabolism. Overperfusion and overloading the circulation damaged the lung. Underperfusion or inadequate circulation resulted in the dreaded complication of metabolic acidosis.[14] Unfortunately, at the time, the complications could not always be anticipated, and when they occurred, the cause was not readily apparent. Only with time and experience, by others as well as their own, could a smooth, relatively trouble-free procedure become established.[17,24,25,26,27,28]

In working toward the first human case, perfection was constantly on the minds of the team members. During the phase of animal experimentation, hours were involved in preparation. They needed to obtain blood to "prime the pump" and to perform the surgery. Bloods were drawn on certain days of the week. This had to be done judiciously to minimize public criticism, which was not taken lightly. Progress in cardiac surgery would have been seriously hampered, if not halted altogether, without the cooperation of the Humane Society. The members had to spend innumerable hours in rehearsing their respective roles so that they could work smoothly as a team. This became more important as surgery on the heart developed a wider menu of procedures.[27,28] These unselfish surgeons, like others elsewhere in the world, spent countless hours away from their practice of medicine and their families. They will probably never be justly compensated for their efforts, although they did not participate with such expectations in mind.

Gebauer worked closely with the team that included Drs. Scott C. Brainard, Carl B. Mason, Albert K.S. Chun, and Noboru Akagi, with the assistance of technologist Mary Connor.[30] One might have assumed that Gebauer would be *the* surgeon of the team because of his manual dexterity, extensive experience and reputation. Back in 1940, he had done the first

Ductus Arteriosus ligation performed in Ohio.[31] He repeated the feat in West Australia and Victoria in 1943 and 1944, respectively. Yet he said, modestly, "younger hands are better." The team was well served by Gebauer's decision to concentrate on the less glamorous role of "manning the pump."

Before long, he worked on yet another problem, to attain hypothermia rapidly and expeditiously. Lowering the body temperature decreases metabolism and reduces the complications of over- or underoxygenation and acidosis, particularly valuable in prolonged procedures. Hypothermia for surgery other than the heart (in which the heart is arrested), the lowering of body temperature is limited to 28°-30°C, since cardiac arrythmia and even ventricular standstill occur at 22°-26°C.

In cardiac surgery, the temperature can be lowered below 18°C. Researchers were encountering serious complications with hypothermia. Gebauer developed an ingenious but simple temperature-control device that he adapted to the then-popular Kay-Cross Disc Oxygenator.[30] This modification was well received by the community of heart surgery teams everywhere and subsequently incorporated into the heart-lung machine commercially. This enabled very rapid hypothermia, lower than 25% in eight minutes. This was accomplished without the need for additional blood for priming the machine; in fact, the priming volume was decreased by 280cc. There was no apparent difficulty with oxygenation and no significant hemolysis.

This Hawaii team was now ready and performed the first open-heart surgery in December 1959. In the subsequent decade, cardiac surgery, locally and elsewhere, literally mushroomed. By then, Gebauer became interested in a new challenge.

On the island of Hawaii, over a period of 60 years, the cattlemen had noted an unusual, debilitating disease among their animals.[32] This appeared to occur primarily in the Naalehu district, the Hawaiian name meaning "covered with gray ashes." Fred T. Lynd, DVM, expressively describes the appearance of the pastureland as "red desert soil covered with a sward that struggles or flourishes with seasonally variable rainfall."[32] The condition, which came to be known as "Naalehu Disease,"[33] was characterized by degeneration of connective tissue resulting in diffuse arteriosclerosis, pulmonary ossification and articular chondropathy.[32,34,35] In addition, there was muscle atrophy and hair changes reminiscent of aging in man.

In the beginning, the Department of Agriculture and Forestry of Hawaii was involved. However, the possibility of shedding additional light on human aging processes attracted the attention of the U.S. Public Health Service, the state Board of Health, and ultimately, the National Institutes of Health. Interest, for Gebauer, meant involvement. He performed serial carotid artery and lung biopsies together with Albert K.S. Chun, MD.[35] By 1965, the researchers determined that the condition was due to high potassium, marginal phosphorus and a deficiency of magnesium. They noted that the abnormality could be reproduced consistently and in a short time (three years). What was particularly interesting was that, with the correction of the deficiency at a certain stage, the animals showed clinical improvement, and regression of the lesions occurred.[32,34,35]

In 1966, the Hawaii Heart Association recognized Gebauer with a "Distinguished Achievement Award." At the time of his "announced" retirement in 1970, he was associate professor of surgery, University of Hawaii John A. Burns School of Medicine. However, he soon found another project to fill his time. He assisted the City & County of Honolulu in modernizing the paramedical crews for the ambulance service. The latter had, from time to time, come under severe criticism by various sectors of the community. As a part of his involvement, he eloquently defended this service.

As I see Paul Gebauer today, "total retirement" is only what is apparent on the surface. He has helped dress meat for his restaurateur daughter and son-in-law for four years; he remodeled parts of his home, and more recently, designed and patented a golf club that enables the average golfer to add an extra 20 to 30 yards. These ventures, like all others, have not been financially lucrative. His daughter did not pay him; his wife thanked him, and the U.S. Golf Association declared his golf club illegal. However, these nonmedical projects attest to a mind that is still constantly active.

As a deeply motivated and dedicated physician, Paul William Gebauer has earned his right to a place among the great physicians of Hawaii. Like them, this doctor, modest and without a flair for limelight probably will, to quote medical historian Professor Henry Sigerist, ". . . sink back into the waters of oblivion."[36] This is because doctors of today seldom stop to reflect upon the fact that the wide resources available to them now are, in fact, a blend of contributions from their predecessors.

Who first counted the pulse? Was it Herophilus, a physician of the Alexandria School about 300 B.C.? Or, was it Johannes Kepler in 1600? Who cares? More important, who benefits? The patient, of course. Isn't this what the practice of medicine is all about?

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REFERENCES

1. Gebauer PW: Catheter for bronchospirometry. *J Thoracic Surg* 8:674, 1939.
2. Gebauer PW: Twin spirometer for bronchospirometry. *Dis Chest* 6:377, 1940.
3. Gebauer PW: Bronchoscopic mirrow for upper lobe visualization. *J Thoracic Surg* 9:89, 1939.
4. Gebauer PW: The use of dermal grafts for stenosis of the trachea and bronchi. *Hawaii Med J* 8:413, 1949.
5. Gebauer PW: Plastic repair of tuberculous bronchostenosis with dermal grafts. *J Thoracic Surg* 19:604, 1950.
6. Gebauer PW: Experiences with surgical reconstruction of trachea. *Am Rev Tuberc* 62:176, 1950.
7. Gebauer PW: Reconstructive surgery of the trachea and bronchi: Late results with dermal grafts. *J Thoracic Surg* 22:568, 1951.
8. Gebauer PW: Three-stage tracheobronchial reconstruction for tuberculous stenosis. *JAMA* 149:538, 1952.
9. Gebauer PW: Brochial resection and anastomosis. *J Thoracic Surg* 26:241, 1953.
10. Gebauer PW: Reconstructive tracheobronchial surgery. *Surg Cl NA* 36:893-911, 1956.
11. Graham EA, Singer JJ: Successful removal of an entire lung for carcinoma of the bronchus. *JAMA* 101:1371, 1933.
12. Heart Surgery. In Cumulated Index Medicus, AMA, Chicago, 1961. Vol. I, Part II, S-956-8, 1960.
13. Kolff WJ: Personal communication.
14. Gebauer PW: A review of four dreaded complications of open heart operations, causes, avoidance, and treatment of acidosis, overoxygenation, heart block and pulmonary damage. *Brit Med J* 5180:1149-53, 1960.
15. Miller DR: Air embolism with Kay-Cross osygenator. *Ann Surg* 151:75-84, 1960.
16. Effler DB et al: Complications peculiar to open heart surgery: case number 15. *Anesth Analg* (Clevel) 38:493-5, 1959.
17. Bahnson HT, Spencer FC: Physiological principles in the use of the cardiopulmonary by-pass. *Aust NZ J Surg* 29:227-34, 1960.
18. Cassie AB et al: Hazard of antifoam emboli from a bubble oxygenator. *Thorax* 15:22-9, 1960.
19. Barnard CN et al: Some experiences with intracardiac surgery using the helix-reservoir bubble oxygenator with total cardio-pulmonary by pass. *S Afr Med J* 33:789-96, 1959.
20. Cresenzie AA et al: Development of a simplified disposable membrane oxygenator. *Surg Forum* 10:610-2, 1960.
21. Husfeldt E et al: The clinical use of a screen oxygenator (Mark III) in closure of atrial septum primum defects. *Acta Chir Scand Suppl* 245:269-72, 1959.

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Exogenous Estrogen, Gender Dysphoria, and Hairy Leukoplakia

Mark Kimbrell, MD*
Kim Marie Thorburn, MD**

*Hormonal therapy for sex reassignment of male gender dysphoria*** may have unwanted physical effects. The effect of estrogen on the immune system in males should be considered in HIV infection. In our patient, hairy leukoplakia after the initiation of estrogen therapy signaled progression of HIV infection.*

Case Report

A 29-year-old male with gender dysphoria and previously asymptomatic HIV seropositivity was treated for bronchitis with oral erythromycin. A week after commencing treatment, he complained of sore throat. Examination revealed white lesions on the dorsal and lateral surfaces of the tongue compatible with oral candidiasis. There was no evidence of candida infection of the esophagus on barium contrast X-ray. Helper to supressor T-lymphocyte ratio was suppressed at 1.1, although total T-helper cells were within the normal range (735 per cubic millimeter). Skin testing with multiple antigens revealed anergy. The candida infection responded promptly to treatment with oral nystatin, but recurred after cessation of therapy. Thick white lesions on the lateral tongue borders persisted despite continued nystatin therapy and were diagnosed as hairy leukoplakia.

The patient had received oral estrogen therapy for gender dysphoria since age 13. Although he had not undergone full surgical sex conversion, he had breast augmentation surgery at age 19. He had lived as a female. Two and a half years prior to the current illness, estrogen therapy was discontinued because the patient was incarcerated in OCCC. During this period, he developed male pubertal changes, including facial hair growth and deepening of the voice for the first time in his life. The patient desired continuation of estrogen therapy. After evaluation by a psychologist according to the criteria of the Harry Benjamin International Gender Dysphoria Association,[1] ethinyl estradiol therapy was reinstituted 10 days prior to the onset of bronchitis.

Discussion

The endocrine management of men with gender dysphoria is estrogen therapy[2]. The sexual practices of gender dysphoric men may place them at risk for exposure to HIV. Our case illustrates a concern about estrogen therapy and risk of exposure to HIV.

There is evidence that estrogen therapy impairs cellular immune responsiveness in men[3]. Reduction of in-vitro phytohemagglutinin-induced lymphocyte transformation has been observed in men who received conjugated estrogens for prostate cancer, Peyronie's disease and gender dysphoria[4]. Reduction of cellular immune competence by estrogen therapy in HIV-infected men could theoretically be additive to T-lymphocyte destruction by the virus. Therefore, estrogen may increase susceptibility to opportunistic infections and other complications of HIV infection.

In our patient, oral candidiasis may have resulted from HIV infection, or treatment with antibiotics. Its persistent recurrence when the patient was off therapy, however, indicates underlying immune dysfunction.

Hairy leukoplakia is a recently recognized affliction associated with HIV infection[5]. The presence of raised white areas of thickening on the tongue, usually on the lateral borders, were originally reported in 1985 by the University of California San Francisco dental group that noted that the lesion had strong association with HIV seropositivity and progression of the infection. In its series, 11% of 123 patients had AIDS at the time of detection of hairy leukoplakia. One quarter of the 80 patients who remained in follow-up with the San Francisco group had AIDS by 33 months after initial detection of the oral lesion (mean duration to diagnosis 7.5 months)[6].

HIV-induced immune suppression in our patient was made evident by anergy and by decreased helper to suppressor T-lymphocyte ratio. Associated complications of immune deficiency apparently have a temporal relationship with the initiation of estrogen therapy. Our case serves as a reminder that a potential impact on cellular immune function must be revealed, in terms of informed consent, to men who are being offered estrogen therapy.

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*** Dysphoria: "Excessive pain, anguish, agitations";restlesness, agitation. —From Doland's 26th Ed.
Hard to bear impatience under affliction — Webster's
Opposite of euphoria —Funk & Wagnalls

REFERENCES

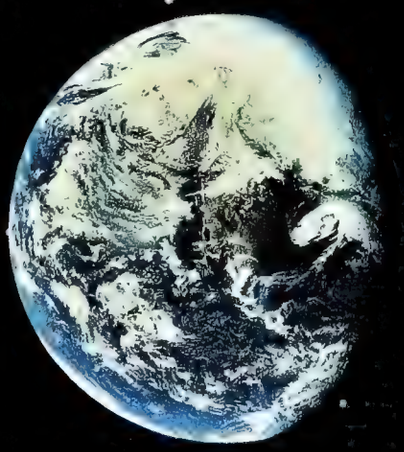
1. Harry Benjamin International Gender Dysphoria Association: Standards of Care. *Ann Plas Surg:* 13:476-481, 1984.
2. Futerweit W: Endocrine Management of Transsexual. Hormonal profiles of serum prolactin, testosterone, and estradiol. *NY State J Med:* 80:1260-1264, 1980.
3. Douglas KC: Patients Who Need Cross-Gender Hormonal Therapy. *Medical Aspects of Human Sexuality* pp. 122-129, July 1987.
4. Ablin RJ, Bruns GR, Guinan PD, Al Shiek H, Bush IM: Modulatory Effects of Oestrogen on Immunologic Responsiveness. 1. Inhibition of DNA Synthesis in Peripheral Blood Lymphocytes from Patients with Peyronie's Disease, Prostatic Cancer and Transsexuals and a Commentary. *Eur Urol:* 5:359-368, 1979.
5. Editors: A New Lesion in Potential AIDS Victims. *Emer Med:* 19:97-104, 1987.
6. Greenspan D, Greenspan J, Goldman H, Dental Disease Prevention Activity of CDC: Oral Viral Lesion (Hairy Leukoplakia) Associated with Acquired Immunodeficiency Syndrome. *MMWR:* 34:549-550, 1985.

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In fact, telecommunications changes are creating futuristic offices which are more efficient, both in time and money, than ever before.

The largest growth in telecommunications use has been facsimile transmission.

Also known as "FAX," this innovation gives businesses an immediate, cost-effective means of transmitting data from one location to another by using established telephone lines.

Documents inserted into the FAX machine are scanned and converted into electronic signals. These signals are transmitted as sounds over regular telephone lines to a FAX machine on the receiving end. There the signals are reconverted to digital form resulting in copier quality reproductions.

Current FAX machines are about the size of a portable typewriter and cost as little as $800.

It's estimated that more than 1,000 companies already have FAX machines in Hawaii, with more sure to install them soon.

Electronic mail and the electronic mailbox is another telecommunications breakthrough.

Electronic mail involves the electronic generation, transmission and distribution of messages. These messages are sent by computer to a storage space (electronic mailbox) assigned to a recipient. At their convenience, the recipients access their own computers and retrieve messages which have been sent.

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A Crossroads Press advertising supplement to Pacific Business News, Hawaii Medical Journal, Hawaii Dental Journal, Hawaii Bar News, and The Balance Sheet.
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Cover Story by Professional Communication

Electronic mail has the advantage of instantaneous delivery of messages at costs comparable to those of postal service. Also, since messages delivered by electronic mail are transmitted digitally, accuracy rates are higher when compared to verbal transmissions.

Time savings is another advantage. Electronic mail messages are stored and forwarded to recipients as soon as they access the system. People no longer waste time waiting for a break in a busy telephone line.

The use of cellular car telephones is also making a big impact on business in Hawaii.

With traditional car phones, a single large antenna is situated in the center of the city, blanketing the entire city with its signals.

Because the signal covers the entire city, only one person may use any particular channel at any given time. Thus, the number of phone users is limited to the number of available freqiencies.

Cellular telephones bypass this system.

With cellular phones, cities are sectioned into a number of smaller areas or cells. Each cell has its own low-powered transmitter which is strong enough to service that particular cell without interferring with surrounding cells and their transmitters.

This feature allows the same frequencies to be used within different cells throughout the city, expanding the number of mobile telephones that may be used at the same time.

Hawaiian Telephone Company and the Honolulu Cellular Telephone Company Oahu have been busy in recent years setting up cellular sites. Presently, there are nearly 20 sites on Oahu allowing users access to nearly all parts of the island.

To date, there are no cell sites on the neighbor islands. However, within two years both Maui and Hawaii are expected to have sites.

As a business tool the cellular phone increases job productivity. Businessmen, whose work entails frequent driving, are able to conduct business transactions while commuting or caught in rush hour traffic.

On Oahu, commuters spend an average of one hour commuting during peak traffic hours. With a cellular phone, they can make productive use of that hour which would otherwise be lost while waiting in traffic.

Related to traffic and commuting is a 1987 article in Pacific Business News written by Dan J. Wedemeyer, a professor in the Communications Department at the University of Hawaii-Manoa and president of Communication Associates, Inc.

According to Wedemeyer, by the year 2000 Oahu's workforce is expected to increase by an additional 47,000 people. It is also expected that by 1995 automobiles on Oahu will increase in number by another 150,000.

Such facts paint a grim scenario for those of us who live outside of downtown Honolulu, but must travel there for meetings.

But if cellular telephones aren't the answer for all commuters, perhaps teleconferencing is another viable alternative.

Like electronic mail, teleconferencing permits an exchange of messages using electronic transmission. However, unlike personal electronic mail, these messages relate to a particular subject and are arranged topically. (A history of the teleconference, similar to the minutes of a meeting, is also available.)

A teleconferencer may log into the conference at any time and receive all new data input since the previous log-in.

Teleconferencing offers users the advantage of crossing time barriers and communicating with people in different time zones, eliminating time and geographic barriers completely.

It also provides economic savings by reducing traveling costs, and it allows for immediate action on issues versus waiting for a next meeting.

People communications aren't the only type that have been advanced by the telecommunications revolution. Computer-to-computer communications have also been pulled into the telecommunications wave with the increasing use of modems by businesses.

Modems function similarly to FAX machines.

Where FAX machines use telephone lines to link one machine to another, modems use the lines to connect one computer database to another. Unlike FAX machines, however, data sent along the line by modems are sent straight to the receiving computer's database.

Early modems functioned at 300-bit-per-second (bps) and took more than 50 minutes to send a 50 page file over the telephone lines. Modern-day modems operate at 1,200 bps and 2,400 bps.

A 1,200 bps modem is able to send a 50 page file over the telephone in a little more than 15 minutes. A 2,400 bps modem can do the same in eight minutes.

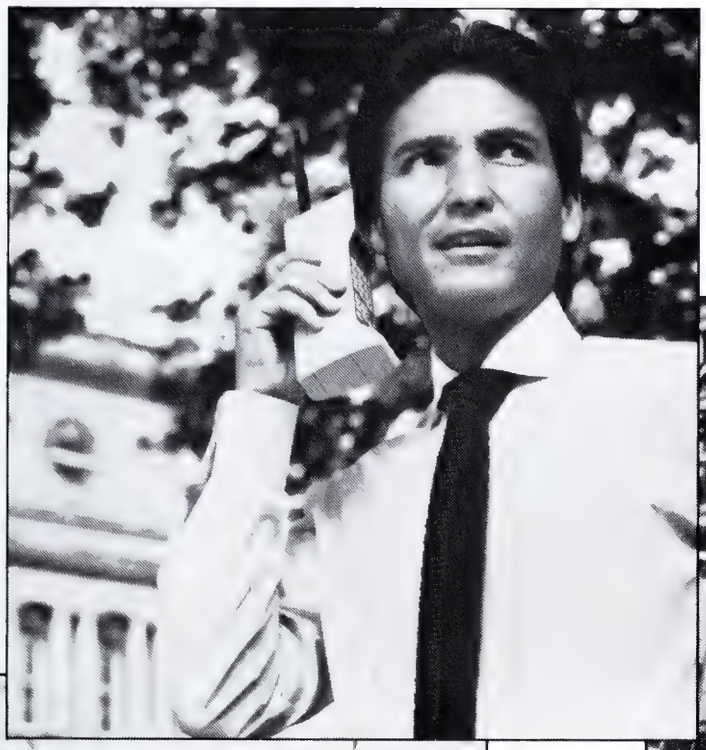
Within the last year or so, manufacturers have begun marketing a 9,600 bps modem for small businesses. This modem operates at a rate four times quicker than a 2,400 bps modem.

The telecommunications revolution has hit Hawaii.

It is providing time saving and cost efficient business tools to businesses in Hawaii. And it has brought Hawaii to the edge of the 21st century.

Telecommunications — born of technological advances in computers, satellites and other data communications channels, appears to be the solution to a host of problems related to doing business in an island environment.

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High Technology Development Corp.

The High Technology Development Corporation (HTDC) is a State agency that seeks to promote the growth of technology-based industries in Hawaii.

"We have particular strengths," says Bill Bass, HTDC Executive Director, "and we can succeed by exploiting those strengths, which include space exploration and development, telecommunications and ocean science and technology to name a few."

With regard to space, HTDC is assisting the efforts of the Department of Business and Economic Development to promote Hawaii as a center of space activity. "The University of Hawaii has been very active in the NASA programs," Bass said, "and SETS, Inc., a local company has had successes in the field of remote sensing. Being the southernmost state in the U.S. and having the ability to launch in both polar and equatorial orbits from the same site are significant advantages for the development of a space launching site in Hawaii." In November, HTDC will conduct the fifth annual Governor's Symposium on High Technology with its focus on space and space communications.

As the only state totally surrounded by deep ocean, Hawaii has easy access to an inexhaustible resource. Whether the application is generation of electrical power through the ocean thermal energy conversion (OTEC) process, reclaiming precious metals from the ocean floor or raising high value seafood the ocean offers Hawaii an exciting future.

These are but three of the many areas in which Hawaii enjoys unique natural advantages. Its central Pacific location makes Hawaii a natural site for the establishment of regional headquarters for high technology companies seeking to enter or expand in the burgeoning Asian markets. United Airlines, Federal Express and most recently Motorola Communications International have established regional headquarters in Honolulu, and the State welcomes these operations and looks forward to many more.

How to choose the right FAX

With dozens of models to choose from, prices ranging from $900 to $13,000 and a list of features which would confuse a rocket scientist, how do you find the right machine for you?

Simple. You call FAX Headquarters. We're experts in helping businesses communicate better. Once we understand your business needs and applications for FAX we will recommend the machine you need.

So, if now is the time for you to consider FAX, or upgrade your present equipment, call Oceantronics, Oahu's FAX headquarters.



Oceantronics
"Your FAX Headquarters"
439 N. NIMITZ HWY.

Robin & Dackerman, Inc.

Since establishing its Honolulu office over two years ago, Robin & Dackerman has made its presence well-known within the telecommunications industry. As an independent information management and telecommunications consulting firm, its client list includes Hemmeter Corp., Aloha Airlines, Hawaiian Airlines, the Hawaiian Regent Hotel, Castle Medical Center and HMSA, Robin & Dackerman provides expertise in the three key areas of voice and data communications, information management, and office automation. Also included in their services are analyses, systems planning, design and implementation, as well as user training and on-going management, support and trouble-shooting.

"We draw on the combined knowledge of our vast consultant base to fit client needs," says Jim Ailworth, who heads the Honolulu office. As increased options, changing technology and the nature of competition creates demand for high-tech solutions,

Ailworth says Robin & Dackerman will provide the resources to meet client needs, whether in implementing a high-level technology plan, information systems plan or the acquisition of a new phone or office automation system.

Oceantronics, Inc.

Oceantronics, Inc. has sold and serviced marine electronics products for eight years . . . products people trust with their lives. The life of your business is often entrusted to new telecommunications equipment, and you can feel "lost at sea" when making these decisions. That is why you need a partner like Oceantronics, where identifying needs and solving problems is our highest value. We carry the broadest array of high-quality FAX machines in town, including leaders like Panasonic and Fujitsu. We are now Oahu's exclusive distributor for the Panasonic copier line. We also sell AND service the finest cellular phones, including all three of the models identified as "best buys" by Touche Ross in their May, 1988 "Executive Computing" client newsletter. So let us work with you, and you'll always reach your destination.

Tel-A-Com Hawaii

TIE Datastar is a telephone system with so many features it would take the length of this article to name them all. Yet, what's even more impressive is that the system is designed for companies with between 30 telephones, and 192.

"It's not only a sophisticated system, but it's also user friendly," says Ted Metz, Tel-A-Com's new director of sales and marketing. Metz attributes this to the fact that the Datastar is manufactured by TIE, one of the world's leading designers of advanced communications for small- and medium-sized businesses.

TIE Datastar is a fully digital system that simultaneously transmits voice and data. It can handle 32 lines and 96 phones, and can be easily expanded to accommodate 64 lines and 192 phones.

Says Metz, "Unfortunately, obsolescence is built into lots of phone systems. With Datastar, the designers planned for growth, not obsolescence."

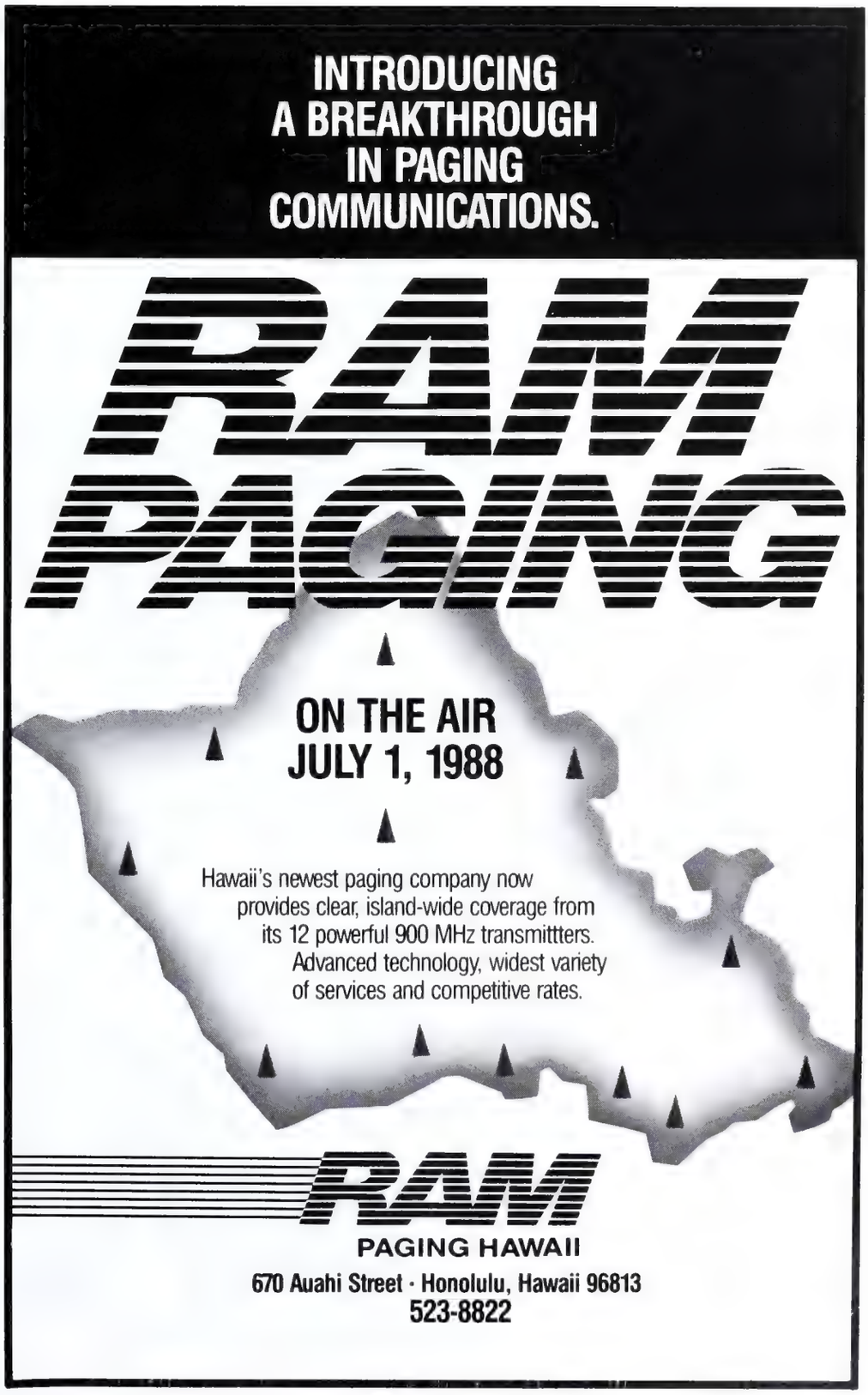
TIE Datastar is self-diagnostic, so if there's ever a problem, the system itself phones Tel-A-Com's technical center and prints out the problem.

"It's a remarkable product," says Metz, "but it comes with a superior level of service, as well."

All Tel-A-Com salespeople and technicians are fully trained and unusually knowledgeable about not just their products, but the competition's.

"I once saw (company president) Terry Janocko talk for seven hours straight about competing phone systems," says Metz. "He knows what's best for a customer because he knows everyone's products inside and out."

Some of the companies using the TIE Datastar in Hawaii are Eagle Distributors, American Express, CondoTech, Communications Pacific, and Belt Collins. Tel-A-Com has been in Hawaii for 17 years and is the exclusive dealer of the TIE Datastar in the state of Hawaii.



What do 50,000 Hawaii Business

Tel-A-Com

The Smartest Telephone Decision in Hawaii



Large system features at small system prices!

SIMULTANEOUS VOICE and DATA SYSTEM at the most cost efficient pricing in Hawaii. Every station can support Data communications economically - today or in the future.

20 to 192 telephones with economical growth as a Key System, Hybrid, or PBX. Three systems are supported in one unit for all business needs and expansion.

Built in "Call Accounting" with account codes and custom call reports are standard.

Optional "CPU and Power" redundancy is provided for the highest reliability in its class

Standard "Auto Fault Reporting" will call the Tel A Com office day or night in the event of a failure. This feature provides the best service available in the marketplace.

Standard "System and Station Voice Prompts" help all users maximize system features.

Hundreds of other standard features are included that make the Data Star the best system investment for today and the future. Over 3000 systems installed worldwide.

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More than just a telephone company.

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Hawaii, Inc.

TEL-A-COM HAWAII ANNOUNCES:

IBM 9751



Hawaii's State-of-the-Art for Business Telephones.

Imagine—the power to handle all the voice and data requirements of Hawaii's businesses, large and small—packed into a digital PABX the size of an average bookcase.

It's here—the IBM 9751 Business Communications System. An integrated, fully-digital office communications system created by IBM and ROLM, two of the world's leaders in innovation.

Call TEL-A-COM at 524-1995.
And say hello to the future.

TEL-A-COM HAWAII / IBM

TEL-A-COM HAWAII 850 Iwilei Road, Honolulu, HI 96817

First Hawaiian Leasing

In the last 20 years, leasing has been viewed more and more favorably as an alternative means of acquiring capital equipment when compared to using conventional bank financing. However, with the rapid pace of technological change in recent years primarily in equipment such as computers, word processors, facsimile machines and other related "high tech" machines, leasing has become regarded as the preferred method of financing.

Companies have discovered that it is the productive "use" of equipment as opposed to ownership of the equipment that produces profits. Leasing enables companies to acquire the "use" of the equipment they need usually upon more favorable terms than conventional financing.

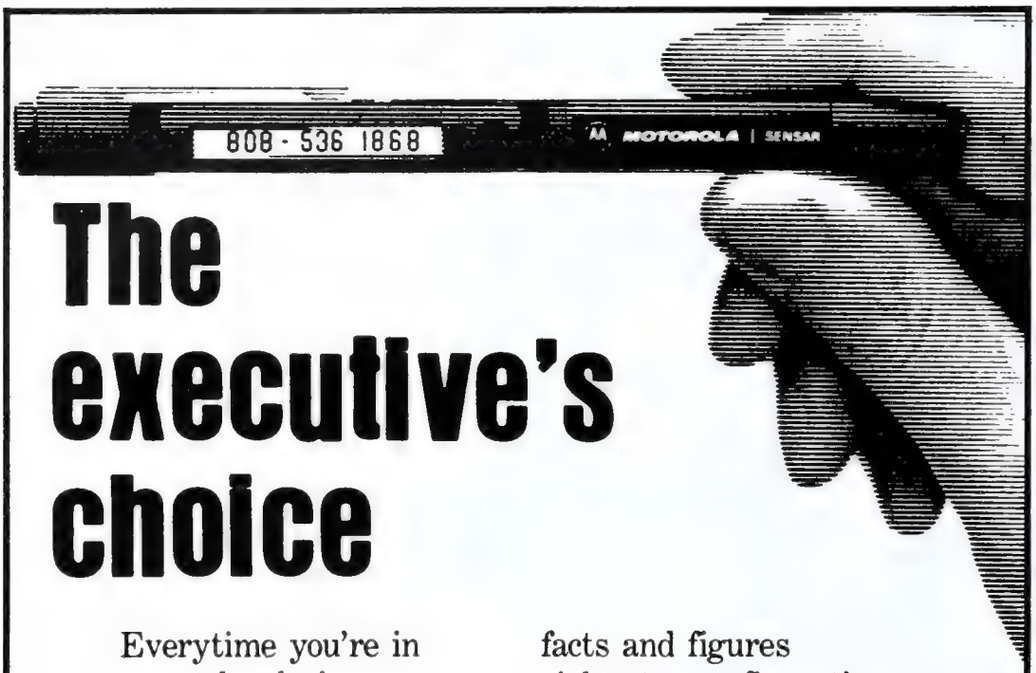
Monthly lease payments have traditionally been lower than comparable loan payments. This is true because the lessor, as the owner of the equipment, enjoys the tax benefit of ownership of accelerated depreciation. Since the lessor realizes a tangible tax savings from the depreciation, he passes this savings through to the lessee by means of a lower monthly payment.

Lease payments are also usually fixed for the term of the lease whereas conventional commercial loans are usually tied to a floating index like the "prime rate" as a result, monthly payments can vary over the life of the loan. Obviously, most companies prefer the security of having known fixed monthly payment as opposed to incurring the interest rate risk associated with a "floating index".

Leasing also conserves a company's capital since it provides 100% financing of the equipments cost to include delivery and installation charges. This allows the company the opportunity of employing its capital in alternative ways and perhaps using it more productively in its primary business.

Additionally, the Tax Act of 1986 included provisions that made leasing an attractive alternative to other types of financing.

Leasing is often an attractive alternative to purchasing for many businesses. However, each business is unique, both from a tax and accounting view point, and the lease versus buy decision should be carefully considered in light of your business's specific needs.



The executive's choice

Everytime you're in your car, at lunch, in a meeting, or just on the street, you leave yourself open. Open to missing an important client, important meeting, an important opportunity. But now you can do something about it.

The Motorola SENSAR Display Pager clips easily into shirt or jacket pocket, just like a fine fountain pen. It's designed to put important facts and figures right at your fingertips to help you make timely decisions.

What's more, if you're in a meeting or don't want to be disturbed, you can be alerted quietly. Find out today how easy it is to stay in touch the stylish way with the Motorola SENSAR Display Pager. Call McCaw Telepage today for complete information.

We offer the complete line of state-of-the-art and easy-to-use pagers from Motorola.

McCAW TELEPAGE

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536-1868

VISA MasterCard

NBI's The Office Place

As more businesses turn to facsimile as the fastest, most economical way to communicate, companies in Hawaii are turning to NBI's The Office Place for a full range of Canon fax machines to suit their many needs. From compact line of personal fax, to the intelligence of a 16 megabit built in memory, The Office Place offers high quality, multi-featured fax machines at affordable prices.

With prices starting at just $899, now any company can enjoy the advantages of fax. Canon machines offer features like automatic dialing, speed dialing, automatic receiving, plain paper fax, and more. Advanced machines provide highly sophisticated features — for example, relay broadcast functions make it possible for one document to be sent to more than 17,000 locations at one time using the Fax-730. With the purchase of an op-



Once upon a time, this was considered a luxury.



So was this.

If you're a busy executive, cellular phone service from Hawaiian Tel is no longer a luxury. It's a necessity.

Cellular is the most important business communications breakthrough since the advent of the telephone itself. It lets you make and receive calls from almost anywhere. So while others are on the road, you can be on the phone.



Besides the obvious business advantages, cellular service from Hawaiian Tel is backed by 104 years of local knowledge, and the nationwide cellular expertise of GTE Mobilnet.

So if effective communication is important to your company, dial 732-9500 and ask about cellular phone service from Hawaiian Tel. It's everything your business could call for.

GTE Hawaiian Tel

Beyond the call

An authorized agent of

GTE Mobilnet®

Cellular Communications

tional RS-232C interface, the Canon Fax 350 can be teamed with a personal computer to work as a printer and a scanner. Some machines have a delayed sequential broadcast command which allows you to send or receive documents at any convenient time, or when phone rates are lowest. Higher speed machines mean less time on phone lines, lowering transmission costs even more.

If you would like to know more about Canon Facsimile, call the professionals at NBI's The Office Place, 847-0221.

McCaw Telepage

McCaw Telepage, Hawaii's leading provider of personal communications, is now among the top five paging companies in the United States. In part, McCaw Telepage is the only carrier in Hawaii capable of providing a complete selection of paging services with full field support. We offer traditional Tone Alert and Voice Pagers, and executive Digital Display models; such as the thin Sensars which is no bigger than a fountain pen; and the compact Bravo. The top of the line pager is the AlphaNumeric which can both receive and store written messages. It will hold messages which can be easily retrieved for future viewing.

McCaw Telepage has recently introduced a new service called PagePlus. PagePlus is a unique pager answering service that requires no hardware or installation. It operates 24 hours a day, relays announcements, answers and store messages until *you* are ready to respond.

This summer McCaw will be offering Nation-Wide Paging. Then, when local executives trips either interisland or to the mainland, they can still be in touch with their office!

GTE Hawaiian Tel

Hawaiian Tel's years of telecommunications experience makes them a natural provider of cellular communications. They, in conjunction with GTE Mobilnet, offer an extensive line of equipment with rate plans designed for individual and group users. However, their insight into what cellular customers need extends beyond equipment and rates; they also value customer service and innovation.

Phil Schmidt, Mobile Communications Manager explains that Hawaiian Tel has 10 agents positioned around the island; they are strategically located providing a convenient distribution center for everyone. We also have sales and special promotions to encourage our customers to use the cellular service.

A cellular phone isn't just for executives. It's for everyone who's on the go. It can also be valuable for those who drive alone at night or as a means of making outbound calls in response to a pager call. Schmidt believes that customers need to be aware of many factors when choosing a cellular phone. For instance, for travelers to the mainland GTE Mobilnet's "roaming" feature allows users to operate their phones in over 200 cities automatically. Competitive prices, quality products and customer service should all be a part of the decision making process.

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Canon

Personal Faxability!

FAX-120

$1,435



reg. $1,995

The ultra-compact Facsimile/Telephone that's ideal for desktop use. The FAX-120 is an affordable personal facsimile and multi-function telephone with features like automatic dialing/re-dialing, speed-dialing, document memory, document feeder, automatic receiving and much more.

FAX-350

$2,595



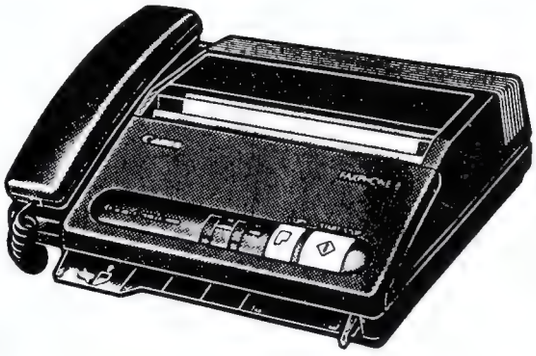
reg. $2,995

This plain paper facsimile features super-fine mode, Halftones in 16 shades of gray, confidential messages, 82 location speed dialing, high speed transmission and compatibility with G2/G3 most N. America 6-minute FM units.

Faxphone 8

$899 reg. $1,295

One of Canon's most cost effective fax machines, the Faxphone 8 combines fax, telephone and copier in one compact unit. It's simple, easy to use, and offers features like automatic reception, automatic document feed, fine mode, and convenient last number redial.



NBI's THE Office PLACE

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Tel-A-Com Hawaii

What do Hawaiian Electric, Hawaiian Air, and Campbell Estate all have in common? The answer . . . A new telephone system purchased from Tel-A-Com Hawaii called the IBM 9751.

In explaining Tel-A-Com's recent surge of large sales, company president Terry Janocko says, "the IBM 9751 is an unbelievably well thought out system from one of the world's most respected manufacturers."

A key benefit of the system is that it allows a company to grow from 50 phones to as many as 20,000 without having to change, or adapt any new equipment.

"Companies realize they're buying a system that won't become obsolete as the company gets larger," says Janocko.

Another attractive feature is that the IBM 9751 allows companies to run their computers via phone lines, thus eliminating the need for miles of unsightly and expensive computer cables. Running voice and data over the same, existing telephones wires can mean big savings in operations and maintenance costs.

The system features digital phones and provides non-blocking service, which is a critical consideration for future growth and enhancements. Even with data users constantly on line, a caller will always get a connection because of the non-blocking service.

The system also includes integrated "voice-mail", a digital voice processing system that takes phone messages, stores them, or forwards them to other extensions in an office — making those "While you were out" notes a thing of the past.

"I've never ben more excited about a product," says Janocko. "The IBM 9751 is a total communications solution and that's why some of Hawaii's best and largets companies are attracted to it."

Tel-A-Com is the exclusive independent dealer of the IBM 9751 in the state of Hawaii.

Honolulu Cellular Telephone Company

Honolulu Cellular Telephone company was the first to bring the productivity-enhancing service of cellular communications to the State of Hawaii. Officially "on the air" only since June 1, 1986, its customer base has swelled to thousands of satisfied users, ranging from physicians to housewives, bankers to carpenters, and virtually all consumers concerned with making the most of their time.

While providing superior cellular communications is Honolulu Cellular's paramount objective (via its $12 million dollar, island-wide system), modern technology has presented various other components to further enhance cellular's applications.

PERSONAL COMPUTERS — With the correct interface, a portable PC, with a modem, will support most any task required by today's business executive. Users can communicate with a corporate main-fram and receive up-to-the-minute data, call up the most current activity on Wall Street with a few key strokes, or formulate complex projections on spread sheets — all made possible from anywhere on the island with cellular connectivity through Honolulu Cellular Telephone Company.

FACSIMILE MACHINES — Perhaps one of the most exciting additions to the office of the 80's, portable fax machines, with cellular, can be taken anywhere. Users can transmit copies of floorplans, reports, even photographs — to or from any location on the island.

CREDIT CARD READERS — Charge authorizations can be handled from anywhere, in a flash. With cellular communications from Honolulu Cellular Telephone Company and a credit card reader, the security of authorized charge is available in seconds!

Today, in addition to providing crystal clear voice transmission, the ability to utilize a Personal Computer, Facsimile Machine, Credit Card Reader allow Honolulu Cellular to provide more than just great talk.

Ram Paging Hawii

RAM Paging Hawaii, Hawaii's newest radio common carrier has recently constructed a high-powered, state-of-the-art, 900 mhz. paging network designed for crystal clear reception on tone, digital read-out and voice pagers.

RAM engineers designed the Honolulu Cellular Telephone Company network, notably one of the best of its kind in the nation. "The performance of our paging system will be unmatched by all technical and operational standards," says Terry Revnak, President and General Manager of RAM Paging Hawaii.

The 900 mhz. frequency band is clearer and less apt to suffer interference than those of other companies operating in the lower, more congested frequency bands. In addition, the FCC allows a much higher transmitting output power to insure greater signal penetration into dense buildings.

RAM will sell, rent or lease a variety of the newst pager products. Voice mail, a popular new automated answering service will also be a part of RAM's service offering.

RAM Paging Hawaii offices, which include sales, service and customer service are located at 670 Auahi Street, one block mauka of Ala Moana Boulevard on Coral Street. RAM also has offices on Maui and will soon be open on Kauai and the Big Island.

Hawaiian Telephone Company

For more than a century, Hawaiian Tel has lead the way in providing the islands with a full range of services from simple residential telephone services to complex private voice and data networks. Today, Hawaiian Tel is once again leading the way as it rides the crest of the 20th century telecommunications wave.

Hawaiian Tel, a wholly-owned subsidiary of General Telephone and Electronics Corporation (GTE), currently offers a wide selection of telecommunications products and services throughout Hawaii, the Pacific and Asia. Via its submarine and underground cables, microwave radio, satellite transmission and fiber optics, Hawaiian Tel is able to directly connect customers with Canada, West Germany, Japan, the United Kingdom, the Philippines, Australia and 19 other points throughout the Pacific region. In addition, Hawaiian Tel is able to connect its clientele with another 189 foreign countries.

In total, Hawaiian Tel has the capacity to link its customers with more than 200 foreign points. This world-wide capability has made Hawaiian Tel the leading contractor for the design, installation and maintenance of specialized networks for government and military applications throughout the Pacific and Asia.

It has also designed and installed the moderm telecommunications system linking all of Hawaii's military bases.

The Hawaiian Telephone Company — Hawaii's innovator for more than a century.

GOVERNOR'S SYMPOSIUM ON SPACE

November 17 & 18 — Hawaiian Regent Hotel

Preliminary Program

Thursday, November 17, 1988

7:45 Registration

8:30 Breakfast — "Hawaii's Interest in Space" — Governor John Waihee

9:45 "Space Technology for Future Missions"
Dr. Steve Howe
Director for Advanced Technology
Los Alamos National Laboratory

10:30 PANEL I: The Role of Universities in Space

11:45 Luncheon
"NASA'S Outlook on Space"
Kathie Sullivan
Astronaut
NASA Johnson Space Center

1:30 Free Time
Optional Tours:
1. Mililani Technology Park
2. University of Hawaii
Space Related Facilities

6:30 Dinner
"Report on Space World Administrative Radio Conference '88"
Ted Brophy
Chairman, U.S. Delegation to Space World Administrative Radio Conference '88 and Former Chairman of GTE Corporation

Friday, November 18, 1988

8:15 Breakfast
"International Cooperation and Competition in Space"
Dr. John Logsdon, Director
Space Policy Institute
George Washington Univ.

9:30 "Legal Issues In Space"
Dr. Del Smith
Schnader, Harrison, Segal & Lewis

10:15 PANEL II: Space Communications & Remote Sensing

11:45 Luncheon
"ISY 1992"
Senator Spark Matsunaga

1:30 "Future for Commercial Launch Services"
Donald (Deke) Slayton
Astronaut & President
Space Services, Inc.

1:50 PANEL III: Entrepreneurial Space Activities

2:45 "Alternatives for Financing and Constructing Launch Facilities"
James (OX) von Hoften
Astronaut & Manager for Space Programs
Bechtel National Inc.

3:30 PANEL IV: Current Space Activities

4:45 Wrap-up



SPACE ENTERPRISE WEEK IN HAWAII

Consider attending Pacific Rim Opportunities, 2nd Space Entrepreneurs Conference" to be held November 14-16 in Kailua-Kona. Special registration fees to attendees of both conferences.

For information, contact:
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(408) 988-0592

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☐ **Registration Fee — $175**

Symposium fee includes 2 breakfasts and lunches, coffee breaks, aloha reception and proceedings.

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WE'RE THE LEASING COMPANY THAT LOWERS THE COST OF BUSINESS TELEPHONE SYSTEMS.

Renting a phone system is expensive. Deregulation made buying a phone system less expensive. But did you know that you can save even more money by leasing a phone system? It's true. We offer significant cash flow savings by leasing modern phone systems to businesses of all sizes.

And if you still think buying is better, think again. Because buying can leave you with outmoded equipment. Leasing enables you to benefit from all the rapid changes in communications technology by either changing or expanding your system.

We're First Hawaiian Leasing. First in business telephones, computers, first in medical equipment leasing, and first in meeting the needs of hundreds of customers throughout the islands.

Speak to First Hawaiian Leasing first. And discover all the advantages of leasing a state-of-the-art business telephone system. Call 525-7035 for a no-obligation leasing proposal.

FIRST HAWAIIAN LEASING, INC.

A financial services company of First Hawaiian, Inc.

Proceedings of the HMA House of Delegates 131st Annual Meeting

Kauai Hilton Hotel, October 1987*

Sunday, October 11, 1987, 1 p.m.

This second meeting of the 1987 House of Delegates was called to order by Speaker Howell at 1:15 p.m. Secretary Kim called the roll; a quorum was present. Before calling on the Reference Committees for their reports, the A.H. Robins award was presented. This was for the Physician of the Year: Fred Gilbert Jr., MD, given for outstanding community service. It meant a great deal to Fred, coming as it did from his peers in his own community. Speaker Howell welcomed all of the medical students present and also the resident physician delegate.

A request was made to the House to waive the rules so that Dr. McAfee of the AMA Board of Trustees be allowed to be a reference resource person and have input in expediting the reference committee reports. A motion was made, seconded and passed to allow the waiver request. Speaker Howell then called on the Reference Committees. Following are the reports and actions of the House:

Report of the President: The report of President Chang was filed, with expressed appreciation for his many hours of involvement during the past year.

Report of the Secretary: The report of the Secretary was filed.

Report of the Executive Director: The report of the Executive Director was adopted with the following actions and its three recommendations: (1) that HMA develop a long-range plan to include a public education and information campaign, to see that appropriate tort reform is accomplished in Hawaii. This was referred to the HMA Legislative Committee for a feasibility study, with a report back to the HMA Council in six months; (2) to provide a coordinated program for recruitment of new members. This was referred to the HMA Membership Benefits Committee, to act as a liaison for all component societies to develop a coordinated program for recruitment of new members and to report back to the HMA Council in six months; (3) to continue efforts to establish a reasonable and equitable dues structure, and to coordinate such efforts with all component societies. This was referred to the Bureau of Research and Planning, to continue with efforts to establish a stable dues structure and report back to the next HMA Annual Meeting.

HMA Auxiliary President: The report of the HMA Auxiliary President was filed, with commendation for its action to hold the Auxiliary's meeting in conjunction with that of the HMA and with thanks for its support.

The Reports of the AMA Delegates, Legal Counsel, Editor of the JOURNAL, HMA Partners/Development Company Ltd., were filed with commendations to all of the members involved for expending so much time and energy on behalf of the HMA membership.

Hawaii Tumor Registry: The report of the Hawaii Tumor Registry was adopted with its two recommendations: (1) That the HMA seek additional funds from the State for support of the HTR through departmental appropriations and/or through grants-in-aid from the 1988 Legislature; and (2) That the HMA continue to support the existence and operations of the HTR, as this is already HMA policy.

Community Research Bureau: This report and its two recommendations were adopted: (1) That the CRB continue to serve as the eleemosynary organization for the HMA; and (2) That the CRB implement a meaningful development/fund-raising program with which to assist the HMA to serve its members and the community in line with the HMA Missions and Goals.

The Reports of the Bureau of Research & Planning, HMA/EMS Advisory Board, Hawaii Hospital Medical Staff Policy on Analysis and Planning, and the Hawaii Foundation for Medical Care were filed.

Commission on Administrative Services: The reports of this Commission were adopted and included the following: **HMA Employees Pension Fund Committee, HMA Computer Committee; Building Committee** and its recommendation: That the HMA Building committee be maintained on an inactive basis within the commission/committee structure because it may become necessary to activate this committee in the future; and the **Finance Committee/Treasurer's report** which included five recommendations: (1) That the dues for 1988 be increased by 3%, or $15, from $505 to $520 per year; (2) That the balanced budget for 1988 as presented by the Finance Committee be adopted; (3) That the HMA continue its agreement with the Honolulu County Medical Society in 1988 for its share of costs amounting to $130,000; (4) That the auditors for the HMA in 1988 continue to be the firm of Egami & Ichikawa, which has provided excellent service to the HMA this past year; and (5) That council have the authority to approve expenditures of up to $5,000 not budgeted by the House of Delegates for 1988.

Commission on Internal Affairs: The **Bylaws Committee** had presented the proposed addition of a Special Section to the current bylaws under which the Hospital Medical Staff Committee would become a Section — Hospital Medical Staff Section — as directed by the 1986 House. This was adopted with one amendment to paragraph 9.013, which reads: "the governing structure and procedural operation of this section shall be established by the HMA Council *and* periodically *reviewed* in consultation with the Section." The report of the **Publications Committee** was amended to delete paragraph 2, in which new non-member reviewers were named. The report was adopted as amended with its three recommendations: (1) That J.I. Fred Reppun be commended for his prodigious efforts and be reappointed as Editor-in-chief; (2) That Managing Editor Charlotte Beal and Editorial Assistant Judi Kingrey be commended for their pleasant, efficient professionalism; and (3) That an annual $100 award be established for the best scientific article published for the year by a physician, as suggested by President Walter W.Y. Chang, MD. The HoD adopted the recommendation of the **Awards Committee**, that this committee be disbanded with its functions assigned to the **Public Relations Committee.**

The following reports under this Commission were filed: **Hawaii County Medical Society, Honolulu County Medical Society, Maui County Medical Society, and Kauai County Medical Society, The Annual Meeting Committee and The Membership Benefits Committee.**

Commission on Community, Professional Relations, and Peer

(Continued)

*These "highlights" were compiled by staff person Marilyn Lindsey, to whom the HMA and the JOURNAL are much indebted./Ed.

Review: The **Commissioner's Report** was adopted with its three recommendations: (1) That staffing and funding of the CME Committee should continue to allow improved liaison with HMA/CME-accredited bodies; (2) That during 1988, the **Health Manpower Committee** should work with available resources necessary to determine Hawaii's "nursing shortage" and report their findings to the HoD of the AMA at its Annual Meeting; (3) That the HMA utilize staff and the local media in order to educate the public, year-round, regarding teenage pregnancy and associated problems; (4) That through utilization of HMA leadership, the **Physicians' Committee** should develop closer liaison with health facilities and other resources throughout the State. The issue of the impaired physician, was referred to the **Physicians' Committee** with instruction to report back to Council in six months. The HoD adopted the report of the **Continuing Medical Education Committee**, including its two recommendations: (1) That the committee continue its mandated functions and activities; (2) That the committee should implement and improve efficiency and effectiveness by: (a) All HMA accredited institutions and specialty societies on Oahu being required to maintain a 50% minimum attendance at HMA/CME Committee meetings within the HMA year — October to October; (b) Conference phone privileges for Neighbor Island physicians being authorized, since there should be direct communication between physicians representing all HMA accredited entities; (c) The HMA/CME Committee secretary being scheduled to visit all HMA accredited entities to provide assistance/orientation; and (d) The HMA/CME Committee being represented at the ACCME Meeting in April, 1988, by two delegates. Recommendation (d) requiring a budget increase from the proposed budget of $1,900 to $2,900, to allow two delegates to attend the ACCME Meeting in California was adopted as well. The report of the **Health Manpower Committee** was adopted. Its recommendation was adopted after an amendment was made to read: "That the HMA support legislation to increase enrollment for Hawaii nursing schools, with incentives such as scholarships for students." The report of the **Physicians' Committee** and recommendations 1 and 2 were adopted; (1) That this committee continue to operate on an on-call basis, to address impairment problems of physicians in the State, including those physicians who are not members of the HMA; (2) That the chairman of the committee or his/her delegate continue to attend the Annual AMA National Conference on the Impaired Physician (travel expenses already in the approved 1988 budget). Recommendation (3) was amended and adopted to read: That the HMA component societies consider a CME program on physician impairment during the next year. The Committee had recommended that a program on physician impairment be considered by HMA for part of its scientific session at the 1988 annual meeting. The Reference Committee felt it would be more beneficial if each component society planned a program for their members instead.

The report of the **Public Relations Committee,** including its recommendations; (1) That the Public Relations Committee be continued as a standing HMA committee; and (2) That the Committee be used as a resource to provide information on the effect HMA policy decisions might have on its public image, were adopted. The HoD adopted the report of the **MD/RN Relationships Committee** and its recommendation that this Committee continue to operate on an on-call basis to address any issues at the request of either physicians or nurses. The report of the **Senior Physicians Committee** and its recommendation that this Committee be established as a standing committee and that the members be considered as active tactical liaison in matters requiring attention to political problems involving the elderly was adopted. The report of the **Infant Care Review Ad Hoc Committee** was adopted with its recommendation that this Committee remain on-call in 1988, pending further developments of the Child Abuse and Neglect Reauthorization Act of 1987.

The report of the following committees under this Commission were filed: The **Japanese Speakers Bureau; Medical, Moral, Ethical and Legal Concerns Committee; Maternal/Perinatal Mortality; Peer Review; Medical Care Advisory Group for MIEC;** and **MIEC Appeals Committee.**

Commission on Public Health: The house adopted the report of the **HMA/IRB (Subcommittee of the Cancer Committee)** and added a recommendation that Rev. Frank A. Chong, chairman, be commended for his good work for all of his years of service. The report of the **Community Clinical Oncology Program** was adopted along with its recommendations: (1) That the HMA fund a data manager and support activity for Hawaii CCOP follow-up through May 1988 with a budget of $20,000 (this was already included in the proposed 1988 Budget); and (2) That HMA pursue every effort to convince the ECOG to accept the HMA-Hawaii CCOP as an outreach member. The HoD adopted the report of the **Chronic Illness & Aging Committee** and its recommendation that the Committee be continued since it is expected that the health needs of the chronically ill and aging will continue to be important and to increase in the future. The report of the **Alcoholism & Other Substance Abuse Committee** was adopted as well as the first three recommendations: (1) That the name of this committee be changed to **Substance Abuse Committee**; (2) That the Committee urges the House of Delegates and the incoming president to maintain this as an actively working committee, by keeping as much continuity in the committee membership as possible; and (3) That the Committee requests the incoming president to seek Department of Health (DOH) participation (especially from ADAB) by appointing to this committee a representative from the DOH. Recommendation (4) was not adopted (this was a request that the president invite State Judiciary, DOE, and DOH to the 1987 HMA Annual Meeting's Educational Course). Recommendation (5) was adopted as amended to read: The Committee requests an opportunity to meet with the dean of the John A. Burns School of Medicine or his representative in order to start discussions with the medical school to include this subject in the educational curriculum. The HoD adopted the report of the **Pharmacy Committee** with an added recommendation: That the HMA contact the AMA and consider setting up a PADS (Prescription Abuse Data Synthesis) project in Hawaii, to review physician prescription habits for the four D's — Dated, Duped, Dishonest, and Disabled. The report of the **Sports Medicine Committee** was adopted; however, its budget request was denied and the House reconfirmed the budgeted amount by the Finance Committee in the 1988 proposed budget. This action, however, did not deny the chairman of the Sports Medicine Committee the opportunity to submit a request, with a budget outline, to the Council at a later date for additional monies if necessary in order to present a symposium.

The reports of the other committees under this Commission were filed: **Cancer Committee, Communicable Disease, Crippled Child, Jail Health, Subcommittee on Toxic Agents,** and the **School Health Committee.**

Cancer Commission: The report of the Cancer Commission was adopted.

Commission on Socio-Economics: The report of the **Health Care Costs Committee** and its two recommendations were adopted: (1) That the Committee continue to meet regularly to discuss issues that have an effect on health-care costs; and (2)

(Continued on page 343)

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That the HMA Council consider issues/topics about which they would like to obtain in-depth information; in this way the Committee can focus on specific areas of study. The House also adopted a third recommendation from this Committee: (3) That the Committee keep the membership informed as to the Harvard RVS Study. The HoD adopted the report and recommendation (1) That concerned dissemination of the rate of change in fees in the form of historical data, to be published in the Journal or the County Bulletins. This was deleted on advice of Legal Counsel. However, the data is open for any member to come in to the HMA office to review. The budget request for this Committee was already a line item in the 1988 budget. The report of the **Medicare/Medicaid Committee** was adopted along with its two recommendations: (1) That the membership of this Committee continue as presently constituted; and (2) That it continue present activities by initiating studies and by monitoring and responding to issues concerning Medicare and Medicaid. The HoD adopted the report of the **Health Care Delivery & Financing Committee** and both of its recommendations: (1) That the Committee continue to meet regularly in order to complete the projects that have already been implemented; and (2) That the Committee focus on the alternative health-care delivery and financing systems: (a) To establish credibility as a clearing house for objective information; and (b) To develop generic guidelines for review/assessment of plans from the standpoint of physicians and patients. The report of the **Private Health Care Insurer's Committee** was adopted, as was the recommendation as amended to read: That this Committee continue to function on a regular basis in order to address any pertinent issues or problems relating to private health-care insurers. The report of the **Workers' Compensation Committee** was filed.

The report of **HAMPAC**, which is presented directly to the House, was adopted.

The following resolutions were adopted:

Resolution No. 1 Services under Medicare to Immediate Relatives

RESOLVED, that the Hawaii Medical Association adopt as policy, that Medicare reimbursement to physicians will be allowed for services rendered to immediate relatives, as defined by Medicare, except for such relatives who reside in the same household as the physicians; and be it further

RESOLVED, that this policy be communicated to Medicare officials and our congressional representatives.

Resolution No. 3 Long-term Care Policy for the Elderly in Hawaii

RESOLVED, that long-term medical care accessibility, availability, cost and quality is of serious concern to Hawaii's elderly, Hawaii's physicians, and Hawaii's legislators, and this concern was part of the motivating force that initiated the study; and be it further

RESOLVED, that members of the Hawaii Medical Association make themselves available to the governor, the legislative pre-sessions and the 14th session of the Hawaii State Legislature, so as to develop the highest quality long-term care plan and policies for the elderly in the State of Hawaii.

Resolution No. 4 To enhance the Quality of Care and to Control the Cost in the Case of AIDS

RESOLVED, that the Hawaii Medical Association assume the leadership and the responsibility, along with the State Department of Health, the Hawaii Nurses Association, the Hawaii Health Care Association, the Hawaii Long-term Care Association, and others, to review the feasibility of using existing facilities for in-patient and out-patient care, home care and hospice care for those individuals diagnosed as having AIDS; and be it further

RESOLVED, that this effort shall:

(a) Enhance use of already available resources now not being utilized at an optimum level, i.e., patient rooms, diagnostic and clinical laboratories, outpatient facilities, hospice resources and long-term care when necessary;

(b) Provide an alternative to new and expensive construction of isolation facilities and laboratories;

(c) Enhance quality care by centralizing qualified physicians, nurses, and other special staff for diagnosis and treatment;

(d) Provide for efficient and accurate gathering and centralizing of important clinical data, including response to clinical trials of new medication and response to new techniques in diagnosis and therapy; and be it further

RESOLVED, that the House of Delegates of the 131st Annual Meeting of the Hawaii Medical Association support this resolution, and request that an interim written report of progress be presented to the HMA Council at their meeting in April, 1988.

Resolution No. 6 Medical Coalition for Tort Reform

RESOLVED, that the HMA House of Delegates approve the formation of the Medical Coalition for Tort Reform (MCTR), and be it further

RESOLVED, that the House of Delegates reiterate its 1977 stand against mandatory participation in a PCF as a condition of licensure.

Resolution No. 7 High School Education to Prevent Head and Spinal Cord Injuries

RESOLVED, that the HMA purchase the film, "Harm's Way," produced by the National Head and Spinal Cord Injury Prevention Project, for a cost of about $225.

The following resolutions were not adopted:

Resolution No. 2 Allocation of Privileges to Use Health Care Technologies

This resolution brought forth considerable discussion, and although the resolution was not adopted by the House, the delegates respected the position taken by Calvin Kam, author of the resolution. There were concerns expressed that the association should not adopt a controversial policy before the AMA had done so. The Resolves, therefore, were amended, with the concurrence of the author, to read as follows:

RESOLVED, that the medical profession has the responsibility to identify the technologies which its practitioners have the training and competence to utilize in providing health care. The medical profession should establish these technologies openly, based on scientifically valid standards, and should inform the public accordingly; and be it further

RESOLVED, that the above resolved be introduced at the next AMA House of Delegates Meeting, via a resolution (by the delegate).

Nominating Committee

The 1987 Nominating Committee presented its slate of nominees for all elective offices to the House on October 9, at the

(Continued on page 345)

COCAINE CAN PULL THE PLUG ON THE STRONGEST ELECTRICAL SYSTEM.

The brain is feeling euphoric.

But, without so much as a warning signal, the body's electrical and chemical systems are thrown into dangerous imbalance.

Excess adrenaline floods the nervous system. Breathing accelerates, becomes shallow. Muscles contract involuntarily. Blood vessels constrict. The heart twitches.

And then, it's over.

The same internal changes that produce feelings of intense pleasure have set off an internal nightmare.

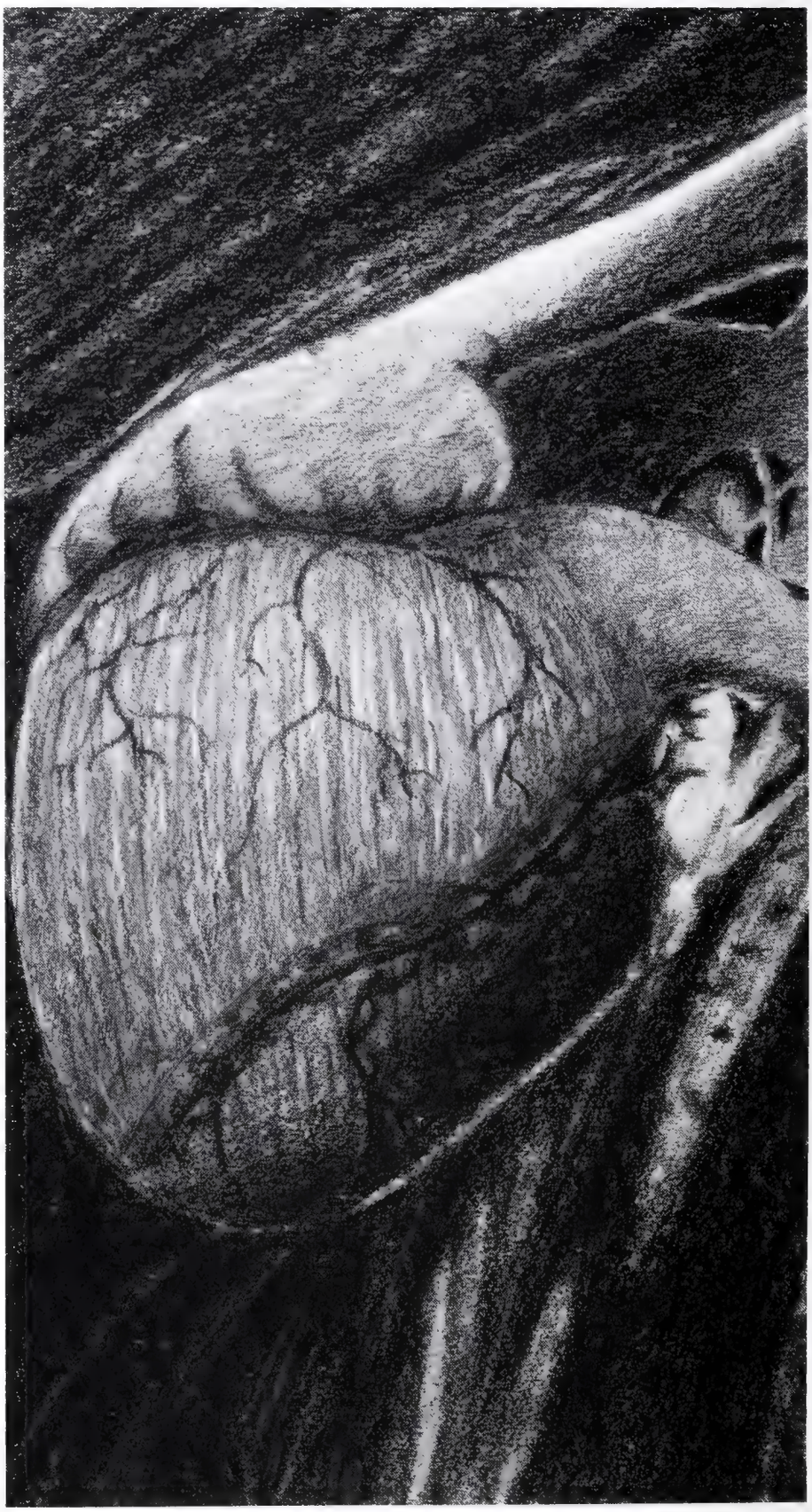
Basically a vaso-constrictor, cocaine is the stuff of seizures and heart attacks.

It can happen in the young, healthy body. It can happen to the first-time user. It can happen with minimal amounts of the drug.

Needless to say, those with congenital health problems, known or hidden are more vulnerable still.

Of course, some people will use cocaine despite these risks (or perhaps because of them). But for anyone with a little common sense, the evidence is hard to ignore.

If you have friends or family who use cocaine, give them a rough time. Because, if you don't it's certain the drug will.



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opening session, election by ballot was carried out on the 11th, the ballot box closing at 2 p.m. The results of this election follow:

President-Elect
Allan Kunimoto
Treasurer
John T. McDonnell
AMA Delegate
Calvin C.K. Kam
Alternate AMA Delegates
James Lumeng
Allan Kunimoto
Speaker of the House
Richard Ando
Vice-Speaker of the House
Herbert Uemura
Councilor from Maui
Denis J. Fu
Councilor from West Hawaii
Edwin P. Gramlich
Councilor from Hilo
Ernest Bade
Councilor from Honolulu
Gladys Fryer
Alvin Furuike
Timothy Olderr
Robert Palmer
F. Don Parsa
Helen Sullivan
Resident Physician Delegate
Lori Inouye-Yamashita
Medical Student Delegate
Gerald Taitague

Elected to the 1988 Nominating Committee were the following:
Honolulu: Philip Hellreich, Russell Hicks, Leonard Howard, Paul DeMare, and Neal Winn.
Hawaii: Robert Irvine
Kauai: Peter Kim
West Hawaii: Minolu Cheng
Maui: George Zakaib

Exhibitor's Drawings: The Exhibitors awarded a total of 14 prizes in their drawing of names of all those who signed up at their booths. There were winners from Kauai, Maui and Honolulu, with the last name drawn being the grand-prize winner: Eugene Carvalho, MD.

The Oath of office was administered to all the newly elected officers present by Milton Howell, Speaker of the House, who also announced that he planned to retire and would not be returning as Parliamentarian or Speaker of the House of Delegates. The House responded in a standing ovation for the excellence of his performance as Speaker. The newly installed president of HMA, James Lumeng, briefly addressed the House, and expressed his appreciation to all those who attended. He looked forward to an even larger attendance at the 1988 meeting, at the Kona Surf, Kauai, October, 1988.

Adjournment: The 131st HMA Annual Meeting and House of Delegates was adjourned at 3:50 p.m. on Sunday, October 11, 1987.

Sportsmen's Awards:
GOLF: William W. L. Dang — President's Trophy (low net) and the Robert Miyamoto Perpetual Trophy (low net), Richard M. Goodale — John Felix Perpetual Trophy (low gross), Ray Maruyama, Medical Service Rep. — George Mills Perpetual Trophy for Pharmaceutical Representatives (low net), Women's Golf Tournament Winner — Edith Wakai (low net).
TENNIS: Round Robin Doubles — James Grenner, Jerry Taitague, medical student and William Wong.
RACQUET BALL: Greg Chun, Medical Service Rep.

LARYNGOPLASTY *(Continued from page 319)*

dimension. The vagus nerve was transected in the carotid sheath in the course of removing this tumor. Paralysis of his left recurrent laryngeal nerve and vocal cord resulted in the poor quality of his voice.

We first saw the patient on September 4, 1987. He had been referred because of an abnormal uptake of scanning material in his nasopharynx. Examination of this area showed no lesion, but indirect laryngoscopy of his larynx revealed a paralyzed left vocal cord in a lateral position. When he phonated his normal right vocal cord could not make contact with the paralyzed cord, resulting in a significant gap between the vocal cords. His voice was very breathy, weak and high-pitched. He also complained of frequent aspiration and coughing when eating or drinking.

At this point, we suggested he consult a speech therapist. Later that month, I attended the American Academy of Otolaryngology Annual Meeting and was introduced to a course in laryngoplasty for vocal cord medialization by Dr. James Koufman of Winston-Salem, North Carolina. As I listened to Koufman, it dawned on me that the procedure he was describing was just what I was looking for. I had not been enthusiastic about Teflon injections in the past because of the aforementioned unpredictability of the result. This laryngoplasty seemed more physiological. I presented it to the patient, who was a reverend, and he was eager to have it done because he had great difficulty functioning in the state he was in; he was incapable of carrying out his greatest love — preaching and singing the gospel.

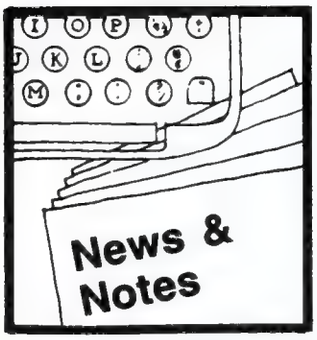
The procedure was carried out at The Queen's Medical Center under local anesthesia on November 6, 1987. The patient had an excellent result. His voice was restored and he was able to resume preaching his sermons and singing to the congregation. His problem with aspiration was also corrected.

REFERENCES

1. Paparella MM, Shumrick DA, WB Saunders: *Otolaryngology,* Vol. 3, Head and Neck.
2. Koufman JA: Laryngoplasty for Vocal Cord Medialization; An Alternative to Teflon. *Laryngoscope* 96: 726-731 1986.

PAUL W. GEBAUER *(Continued from page 321)*

22. Osborne JJ et al: A rotating disc blood oxygenator and integral heat exchanger of improved inherent efficiency. *J Thor Cardiov Surg* 39:427-37, 1960.
23. Benvenuto R and Lewis J: Influence of some physical factors upon oxygenation with a plastic membrane oxygenator. *Surgery* 46:1099-106, 1959.
24. Buckley JJ et al: Principles of management of the patient after open-heart operation. *Anesth Analg* (Clevel) 39:121-31, 1960.
25. Lillihei CW, Engel L: Open heart surgery. *Sci Amer* 202:76-90, 1960.
26. Effler DB: The era of open-heart surgery. *Canad Nurse* 56:695-7, 1960.
27. Gebauer PW: Open-heart surgery for acquired heart disease. Present techniques and trends. *Arch Surg* 84:155, 1962.
28. Bahnson HT et al: Experiences with open-heart surgery during cardiopulmonary by pass in 270 cases. *Amer Surg* 26:227-35, 1960.
29. Creech O Jr et al: The surgical treatment of acquired heart disease utilizing extracorporeal circulation. *J Louisiana Med Soc* 111:319-26, 1959.
30. Gebauer PW et al: A temperature control unit for a commercial disc oxygenator. *Hawaii Med J* 19:651-3, 1960.
31. Gebauer PW: Ligation of patent ductus arteriosus. *Ohio State Med J* 37:538, 1941.
32. Lynd FT et al: Bovine arteriosclerosis in Hawaii *Am J Vet Res* 26:1344-49, 1965.
33. Hendershot JM: Naalehu disease. Report of Board of Commissioners of Agriculture and Forestry, Hawaii (1942): 23-24 Quoted by Lynd FT, et al: Ref 32.
34. Willers EH et al: Experimental studies of bovine arteriosclerosis in Hawaii. *Am J Vet Res* 26:1350-55, 1965.
35. Gebauer PW: Accelerated aging in cattle *Hawaii Med J* 24:1-7, 1965.
36. Sigerist HE: The Great Doctors — The Biographic History of Medicine, W.W. Morton & Co., Inc., New York, 1933.



HENRY YOKOYAMA, MD

TERRENCE ROGERS' RETIREMENT DINNER . . . Feb. 10, Coral Ballroom, Hilton Hawaiian Village . . .

A somewhat flustered emcee, Sherril Hammer, introduced surgery prof Tom Whelan as "Professor and Chairman of the Dept. of Pediatrics". . . Tom quipped, "Well . . . I almost did become a pediatrician . . ." Tom traced Terry Rogers' colorful career . . .

"Born in London, England, in 1924 of poor, but honest folks . . . In 1941 at age 17, enlisted in the Royal Navy. . . . Spent five busy and dangerous years as navigator on carrier-borne torpedo bombers and learned four-letter words . . . Emigrated to Canada where he did farming, logging and trucking. . . In 1952, enrolled in the PhD program in nutrition at UC Davis . . . Received his PhD in 1955 . . . Embarked on a 30-year career as institution builder . . . Taught at Rochester School of Medicine and later at Stanford . . . Participated in the Arctic survival project . . . Came to Hawaii as director of the Biomedical Research Center with Windsor Cutting, dean . . . In conclusion, I congratulate you and thank you. . . I wish you all my heartfelt Aloha. . . ."

Sherril Hammer, recovered now from his first faux pas, struck again. . . . "The next speaker is our *senior citizen*. . . . No . . . rather, our *senior senator,* the Honorable Senator Inouye." Dan acknowledged the humor of the situation . . . "I thought that was a well-kept secret . . . I can now go to McDonald's and get a free coke and in another two years, get a free bus pass . . . Eighteen years ago I had lunch with Dean Rogers . . . He told me his first goal was to upgrade the native Hawaiians . . . Today, 10% of the medical school graduates are native Hawaiians, while only 2% at the Manoa campus are Hawaiians . . . Here is a person, as you know, whose career has included being a navigator, truck driver, physiologist and teacher . . . He now plans to go to Maine as a gentleman farmer, to grow potatoes . . . which probably means that in three years he will be back . . . I understand potato farmers don't last too long in Maine . . . He will be back . . .," Dan predicted.

Pat Blanchette spoke as an alumnus . . . "No one can speak with more affection and gratitude . . . No one has received more affection and encouragement . . . I owe my MD degree to this man . . . He is the reason I went to med school . . . Dr. Rogers has created a social revolution in Hawaii . . ." Pat then projected med school class pictures on a large screen . . . "Lest we forget what this man has accomplished . . . While many accolades will be given here tonight," Pat choked, "I can only say, 'thank you, thank you, thank you. . . ."

Terry Rogers, lei-bedecked and eyes brimming: "Stop! Stop! I'm going to cry . . . For once I'm speechless . . . Reminds me of what my mother said to a 14-year-old, 'You are really a good kid . . . Even though you did call Father O'Leary that terrible name . . .' It was your support which made it all possible . . . From Ralph Platou to Charley Judd . . . Charley was one of 12 doctors in town who was waiting for a medical school to happen . . . I met with Robert Wong, HMA president, at Leahi . . . He stood up: 'Let's cut out the B.S. and start the medical school' There is no way I can enumerate all those involved . . . The late Dave McLung and John H. Burns . . . Senator Inouye always provided the unshakable background . . . He has been so supportive of our efforts . . . Then there are those terrifying ladies in my office who really run the medical school . . . As an immigrant, I came to this country looking for a new life . . . I recognized the greatness of America . . . Only in this country could it have happened . . . And the Hawaiians got screwed again . . .

"I thank you all for coming . . . On a sentimental note, I am reminded of a local surgeon . . . When I interviewed him as a prospective medical student, I asked, 'Why do you want to be a doctor?' 'I want to be able to afford a haole gardener!' he said . . ."

Again and again . . . there was laughter and tears . . . laughter and tears . . . Laughter evoked by the marvelous spontaneous wit . . . Tears for this beloved giant of a man who was leaving the islands . . .

The 66-year-old Hawaii Theatre was closed for demolition back in 1984 . . . At the time, members of the Hawaii Theatre-Organ Society fought to preserve the historic theater . . . Now, a nonprofit organization, the Hawaii Theatre Center, holds the option to purchase the 16,000-square-feet of land on which the theater sits. Norman Goldstein, president, and artist wife Ramsay had put up the initial funds for the Bishop Estate option . . .

Life in These Parts . . .

Glen Silva, Hawaii's first heart transplant patient died in March, five days short of his one-year anniversary . . . For the first few months after the operation, his life was a flood of spotlights, shaka signs and stamina . . . He described himself as "feeling like a new man . . . Reborn, really" and his sense of renewal touched others, leading to an increase in both heart donors and transplant patients . . . Silva's cardiologist, Stewart Matsumoto called Silva," a brave man for his role in Hawaii's first and historic procedure . . .

"It gave him hope and he gave others hope . . ."

Medicaid-eligible AIDS patients will be eligible for the State's new home-care program that started June 1. The State estimates that 50% of all those hospitalized with AIDS are eligible for the program. It is estimated that between 90 and 130 AIDS patients live in Hawaii and so far 116 have died . . . The home-care project will free up hospital beds, which cost AIDS patients an average of $653 a day, and cut the length of stay from an average of 66 days a year to 33 days.

The wife of an elderly Japanese patient recovering from a bout of pneumonitis but still coughing, called: "Is it all right if he goes around the 'MAGO'?" "Oh, I didn't know he was allergic to mangoes . . . If he is, he should avoid them . . ." "No, I mean 'MAGO' (Japanese for grandchildren), not mangoes . . . We don't want them to catch his pneumonia . . ." "Oh!"

Charles R. Morin of Kohala Health Center apparently shows his appreciation of other physicians' efforts with letters to the editor . . . In March, he wrote to the Hawaii Tribune Herald: "There are many fine physicians in Hilo and elsewhere on the Big Island, but I

(Continued on page 349)

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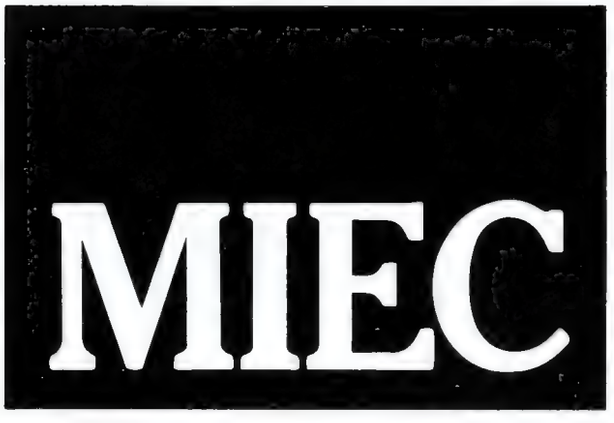
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would like to single out Ravi Pillai, MD, a neurologist in Hilo, as an outstanding example of a compassionate and caring physician. I have had occasion to send several patients from North Kohala to Dr. Pillai, and I think the Hilo community should know that they have an extremely valuable asset in this man . . ." In April, Charles wrote to the Honolulu Star-Bulletin: "I would like to applaud the efforts of the director of health, Jack Lewin, in his efforts to have a terminally ill young man returned to his home district. I think the fact that the head of a large department is able to take the time, and cares enough to be involved with a single individual, shows the highest level of integrity and the best example of service to the community . . . I hope people in this State appreciate the fact that Dr. Lewin is doing a superlative job . . ."

Omnitrack Research Hawaii, Inc., conducted a telephone poll of 400 Oahu residents in February and compared the results with a similar poll in 1985: "What effect do you think advertising will have on the cost of health care? Do you think it will:

	1985	1988
a. Raise health costs?	41%	61%
b. Have no effect on health costs?	31%	19%
c. Lower health costs?	20%	12%
d. Don't know	18%	8%

☆ ☆ ☆

"Make An Impression . . . Rent An Electric Hammer" (Sign sported by Hawaiian Rent All at the corner of Beretania and McCully Streets)

Miscellany

A Romanian, a Nazi officer, a grandmother and her attractive granddaughter were all sitting prim and proper across from each other when the train entered a long dark tunnel . . . There were kissing noises, followed by a resounding slap . . . The grandmother thought: "I'm proud of my granddaughter . . . she slapped the man . . ." The granddaughter mused: "How rude . . . One of them kissed my grandmother . . ." The Nazi thought: "The grandmother slaps me thinking I kissed her granddaughter . . ." The Romanian congratulated himself: "I kissed the back of my hand and slapped the Nazi in the face . . ." (Contributed by John Howett, Dista rep.)

Hors De Combat

A 16-year-old 10-week pregnant girl had an abortion in June 1984 . . . Tests a week later indicated no reason to believe the abortion had failed . . . She did not return for her three-week post-abortion tests . . . When she later discovered that she was still pregnant, it was too late to abort. She delivered a healthy baby in January '85. Jo Lynn Alameida was suing Robert Lui for $750,000 and money to raise the child. The 1½-week jury trial, called Hawaii's first "wrongful birth" case, ended with the jury agreeing that the doctor had not been negligent. One of Almeida's attorneys is a member of the Hawaii Right to Life group and a Mainland expert was also a Pro-life advocate . . .

In 1986, VA officials from San Francisco determined that Tripler was no longer able to meet the acute-hospital needs of Hawaii veterans. Sens. Matsunaga and Inouye co-sponsored a bill to authorize a VA hospital for Hawaii, and Reps. Akaka and Saiki introduced a similar measure in the House. The recommendations are for a 100-bed VA hospital with an adjacent 65-bed facility for long-term care. If funding could be budgeted for 1989, construction could start by 1992.

In January, state health director Jack Lewin was explaining why his department had a controversial contract with a bill-collecting agency. The contract was criticized by the legislative auditor who said it illustrated "many poor and highly irregular management policies in the hospital program." The agency had been paid $563,973 between October 1986 and December 1987 and an additional $105,000 in January 1988 . . . Sen. Malama Solomon was first to walk out and was followed by Rep. Wayne Metcalf who said "the contract was awarded without a competitive bidding process and it just boggles the mind that something like this could happen" . . . The auditor criticized the Health Dept. for "agreeing to a contract that is to be kept secret; a one-sided financial arrangement which provided extremely generous compensation, preferential treatment, and a disregard for patient rights." What the auditor calls "an illegal and unenforceable secrecy clause," Jack Lewin called "a confidentiality agreement that protects the methodology used by the agency in collecting health-care bills . . ."

Miscellany

Pat died and went to Heaven . . . At the Pearly Gates, he waited patiently while St. Peter looked through his book . . .

St. Peter: "I don't find your name listed . . ."

Pat: "What do you mean . . . I was a good father, a perfect citizen, attended church, etc. . . ."

St. Peter: "I'm sorry, but you must be expected down there . . . Please go below . . ."

Pat took the elevator down to where the Devil sat with his Wang Computer (Denny: I always knew that the computer was the devil's tool) . . . Pat to Devil: "They sent me here because I was not expected up there."

The Devil punched his Wang computer . . . "Nope, you're not expected here either . . ."

Pat went back up . . .

St. Peter ruffled through his Good Book and finally found Pat's name . . . "You weren't expected here for another three months . . . Were you on chemotherapy by any chance?" (As told by Dennis Meyer at his Pfizer-sponsored Hypertension Update 1988 lecture at Alfred's . . .)

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Over the Editor's Desk

STEPHEN R.P.K. BRADY, MD

BETA BLOCKERS AND MENTAL PERFORMANCE—Contrary to popular belief, beta-blocker therapy for hypertension does not seem to routinely cause depression, drowsiness, lethargy or impaired mental performance in older patients, says a study in the April issue of *Archives of Internal Medicine*. Fran M. Gengo, PharmD, of the State University of New York at Buffalo, and colleagues at Ciba-Geigy Pharmaceuticals, Summit, N.J., conducted a double-blind study of 27 hypertensive patients, average age 63 years, who were treated for two weeks each with placebo and two popular beta-blockers. Mental performance and drowsiness were measured by several tests. Both drugs controlled blood pressure adequately, and neither produced any more lethargy or drowsiness than did the placebo, the authors say. Drug treatment also produced no mental impairment; in fact, over the six weeks of the study, the patients showed a significant improvement in mental test performance, with greater improvement following administration of the drug metroprolol.

ATTENTION TO PATIENTS' BODY LANGUAGE AND ENCOURAGING VERBAL MESSAGES MAY HELP PHYSICIANS DETECT MENTAL ILLNESS—Physicians frequently fail to recognize mental illness in patients. Two factors responsible may be the physicians' tendency to limit what patients say as well as their failure to note patients' body language, according to a study reported in *The Lancet* by Dr. S. Davenport.

Investigators studied videotapes of the medical interviews of patients who had shown evidence of psychological disorder on a highly reliable questionnaire for detecting mental illness. By viewing the film without sound and then with sound, they sought to learn if patients provided nonverbal and verbal clues that helped reveal psychological distress. They also

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analyzed differences between those physicians who did and did not consistently discover mental illness.

Patients' signs or cues of mental disturbances that were studied included movement (agitated, restless, immobile); vocal (monotonous, sighing, weeping, plaintive); postural (tense, gaze avoidance, dejected); and verbal (mentioning feelings, fears, anxiety, depression).

It was found that most patients with questionnaire scores indicating mental illness provided many clues to their problems in the interviews. However, a substantial minority did not. Verbal cues (direct expressions of feeling) were the most revealing, but postural and movement cues also were quite indicative. Indeed, these generally provided sufficient information so that vocal signs, such as manner of speech, did not add significantly to assessments of patients' mental status.

Doctors who were less able to identify psychiatric disorders seemed to suppress patients' verbal and vocal expressions of psychological distress, thereby losing access to valuable sources of such information. Earlier research also has found that doctors with poor records of identifying mental problems tend to avoid eye contact with patients early in the interview, may not clarify patients' complaints and tend to ask closed questions about physical symptoms rather than ones that invite the patient to describe them fully.

The authors conclude that many psychiatric illnesses presently "hidden" from general practitioners and hospital physicians might be detected if patients were interviewed differently.

AMA SLATES CONFERENCE ON IMPAIRED HEALTH PROFESSIONALS— CHICAGO—The American Medical Association's Ninth National Conference on Impaired Health Professionals is scheduled for October 26 through 30 at the Chicago Marriott Hotel.

The interdisciplinary meeting is the only one of its kind that provides a forum for the exchange of ideas and approaches that aim to help current programs function more effectively and to aid in the establishment of new ones.

Again this year, conference coordinators are calling for abstracts of original research and planning for poster sessions. A special session is being planned for residents and resident training directors.

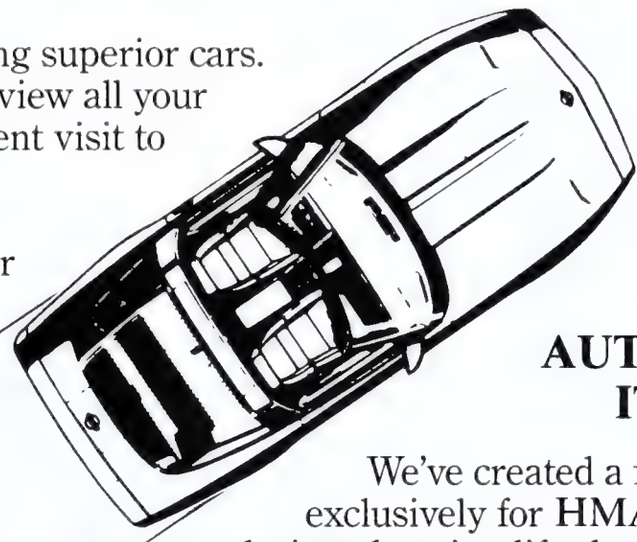
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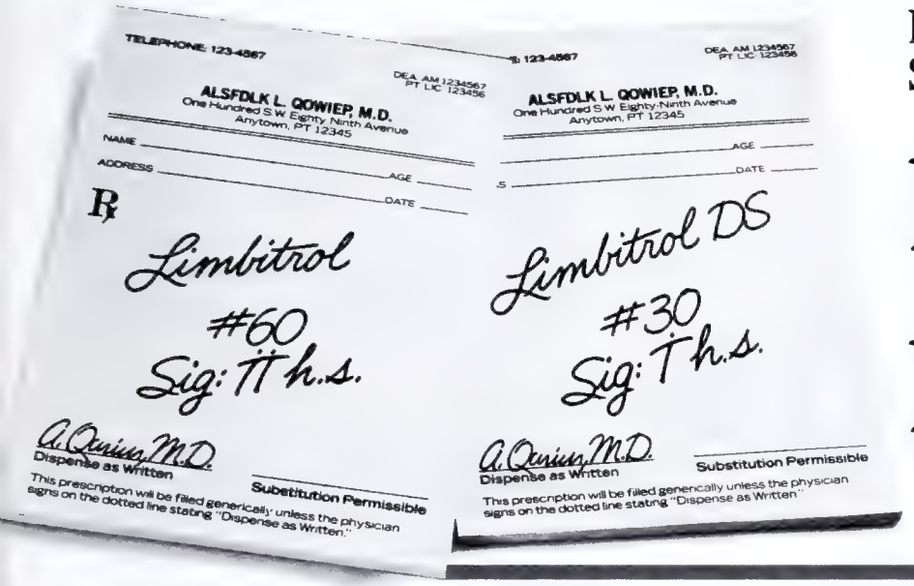


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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

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Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**
Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).
Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.
Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
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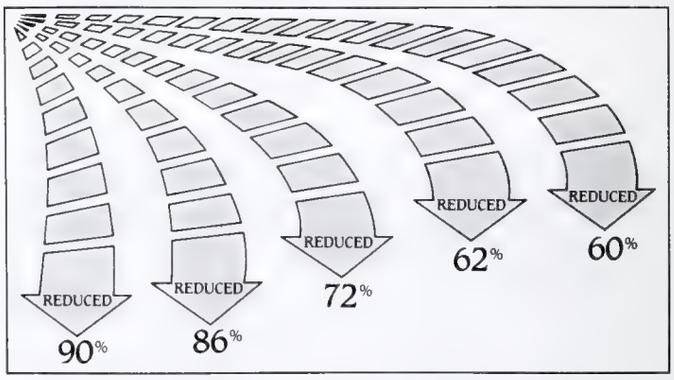
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- First-week reduction in somatic symptoms[1]

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D A

I think the new additions of the maps, etc are just great. Keep up the good information.
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"Observation"

In this issue of the JOURNAL, anesthesiologist John Pearson has written an article on a subject that all hospital medical staffs spend hours of deliberation — direct observation of an applicant in the course of the credential process. He brings up the many conflicting approaches to the problem and suggests some answers. Readers of the JOURNAL, most of whom have hospital privileges, and many of whom serve on hospital medical staff committees clear on up to the top level, may well wish to respond by letters-to-the-editor. We solicit their views, and so does John.

To start things off: Direct observation of an applicant is usually a part of the period when an applicant is granted probationary privileges for a year or other period of time set by the Staff's bylaws. Most often, and particularly in the case of non-surgical and non-invasive procedural privileges, observation is not "direct." It is based, instead, on a review of the record, i.e., the physician's patients' medical charts, whether in- or outpatient, or other doctor-patient "contact." It is the credentials committee that decides whether direct observation is necessary beyond that. It is during this probationary period that the applicant for full privileges is wholly responsible for minding his or her "p's and q's" (see the editorial in the JOURNAL, Vol. 26, No. 4, March-April 1967).

Pearson does not mention the "sharing" of the credential process, except in pointing out that there is now or soon will be a national center for data on each physician, from which hospitals can secure the essentials. This should help a lot, because in the past, particularly in "far-off Hawaii," we have sometimes been "stung" by charlatans who have gotten away with false papers. However, we have also had considerable difficulty in the local credential process because each hospital is loathe to share the process with other hospitals. This makes for much humbug and delay, obstructing due process at times. The smaller suburban and Neighbor Island hospitals would like to rely on Queen's, St. Francis, Kuakini, Kapiolani, for example, not only for the credential process, but also for observational data, or even observation by physicians willing to come out to the styx. A central Hawaii State databank would have helped, but may not be needed if the feds give us one.

In the case of surgeons — and those who seek to do invasive diagnostic or therapeutic procedures such as percutaneous liver or lung exploration and biopsies, or introducing Swan-Ganz or other catheters into the cardiovascular system, e.g. — direct obervation may well be necessary if the credential process is to be done carefully. The essential element of having credentials is to protect the patient; and, as Pearson points out, the hospital and its medical staff. It cannot be overstated that any element of conflict of interest on the part of observers needs to be seriously monitored and excluded.

John waxes eloquent in suggesting that anesthesiologists are "the best" in so far as "observing" surgeons is concerned. We agree. We also feel that physicians who refer patients to surgeons and then "assist" on their own patients, make for good observers, especially when it also means following the outcome. There is no conflict of interest paramount, truly, unless it is done within groups or partnerships or HMOs. When it comes down to it, any physician with the suffix MD can evaluate the work of any other. Observation need not be done solely from within the specialty. When it is, there is an inherent conflict of interest in the making.

We agree that paramedical personnel, such as nurses and others in on the case, should submit observation reports and have them considered as valid.

One last point: Observation is mandatory whenever there is the least suspicion, or "cloud," or a "we're not saying anything about him" in the references submitted by the applicant.

J.I. Frederick Reppun, MD
Editor

Letter to the Reader

Before the February '88 issue of the JOURNAL (the special one that was devoted to Hansen's Disease) went to press, we had received a Christmas greeting from Ma Haide, MD, China.

Dr. Haide is well-known to HMA members Fred Gilbert Jr. and Ed Margulies, and probably others in our community. He is well into his 80s. Originally an American by the name of George Hatem, Ma Haide adopted China as his native land and took on the Chinese name. He was a friend of the famous American historian Snow, of Mao Tse Tung and of Bethune.

This is what he wrote, as chairman, on behalf of the China Leprosy Association/Foundation, Hou Hai Bei He Yan 24, Beijing:

> "Greetings from the People's Republic of China! We wish to thank you and again invite you to participate in the great undertaking to eliminate the oldest disease of civilization from one of the oldest civilizations and from the most populous nation of the world, before the end of this century with the actual scientific tools we have at hand. In 1986 we treated over 20,000 patients (and) . . . will continue to treat for another year before releasing them from treatment. We still have about 80,000 patients in 1988. We are asking you to join us in this further effort. . . ."

The Hawaii Medical Association was pleased to send Dr. Haide that issue of the JOURNAL. According to Fred Gilbert, Ma Haide never responds by mail!

J.I. Frederick Reppun, MD
Editor

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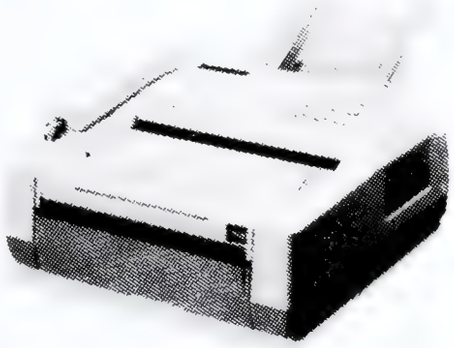
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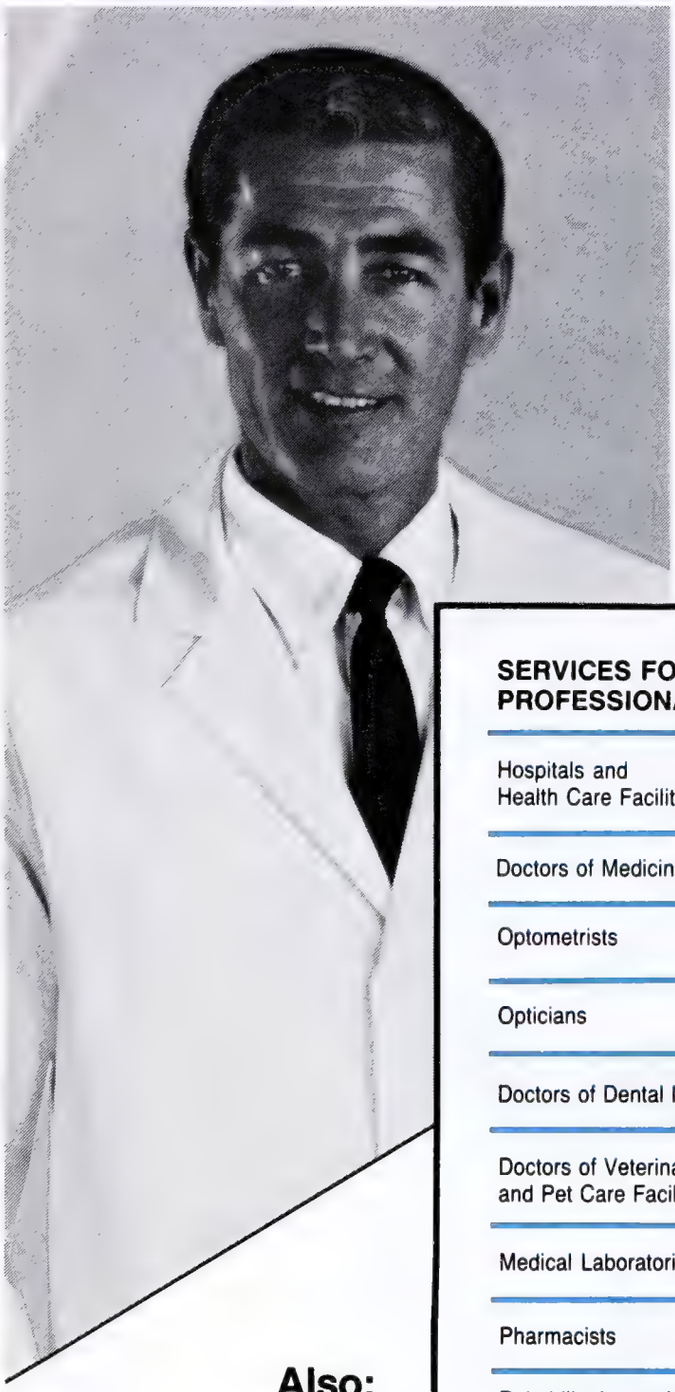
More powerful than any facsimile in its price range, the FAX-230 offers speed dialing to 50 locations, picture perfect halftones, G3/G2 and most N. America 6-minute FM unit compatibility, confidential messages and a built-in timer that allows you to send messages when phone rates are lowest.



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C09327 MLR-261

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■ 500 mg *B.I.D.* for most infections;
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CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract* Bone and Joint* Skin/Skin Structure*	Mild/Moderate	500 mg *B.I.D.*
	Severe/Complicated	750 mg *B.I.D.*
Urinary Tract*	Mild/Moderate	250 mg *B.I.D.*
	Severe/Complicated	500 mg *B.I.D.*
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BRIEF SUMMARY
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INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri;** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION)

PRECAUTIONS

General

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness, therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C.

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS)

Nursing Mothers

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS)

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%)

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%)

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%)

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

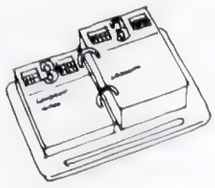
In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION)

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Continuing Medical Education

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CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS

ONGOING

For a complete list of ongoing programs, please refer to the March 1988 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Aug. 13-20, 1988	Eighth Annual Symposium on Fine Needle Aspiration. USCF, Extended Programs in Medical Education, School of Medicine, University of California, San Francisco, CA 94143, 415-476-4251. Location: Kaanapali, Maui.
I Aug. 14-24, II Aug. 17-27, III ug. 21-31, 1988	31st Anniversary Postgraduate Refresher Course, Associate Dean, USC School of Medicine, Postgraduate Div, KAM 307, 1975 Zonal Ave., Los Angeles, CA 90033; for registration only: 800-421-6729 (outside CA); 800-321-1929 (within CA). Highlights: Cardiology, Antibiotics/Rx of Infections, Clinical Immunology, Computers in Medical Practice, Endocrinology, Family Practice, Gastroenterology, Hypertension, Liver Disease, Neurology. Specialty programs in Radiology, Obstetrics and Gynecology, and Surgery: Westin Kauai. Location: Programs 1 and II, Honolulu and Kauai; Program III, Kauai and Big Island.
Aug. 21-28, 1988	International Symposium: Hot Spots in Dermatology, Kauai Medical Group, David Elpern, MD, 3420-B Kuhio Highway, Lihue, HI 96766, 808-245-1507. Location: Molokai.
Aug. 21-27, 1988	Hawaiian Seminar on Clinical Anesthesia, California Society of Anesthesiologists, 1065 E. Hilldale Blvd., Suite 410, Foster City 94404, 415-345-3030. Location: Maui Inter-Continental Wailea.

Council Capers—May 9, 1988

The HMA Council met on Friday evening, May 9, 1988, in our beautiful new HMA building in Honolulu. Leaving Maui on Aloha Airlines that afternoon, just eight days after one of their Boeing 737 planes experienced a hair-raising problem, did not faze this loyal passenger.

Super Landing . . . Just imagine, as you have often heard the familiar announcement: "We are approaching our final descent and the captain requests that you keep your seat belts fastened. Put your seats in the upright position and remain seated until the plane comes to a complete stop at the terminal." However, just eight days earlier, Aloha's Flight 243 made an outstanding emergency landing at our Kahului airport in the afternoon. It is my opinion that this beautiful, well-designed airplane had its "sunroof" retracted unexpectedly. I, along with the majority of the Medical Staff of the Maui Memorial Hospital responded by reporting to the hospital within minutes of the incident. This event brought back memories of my Army Medical Corps days. In every phase of the emergency, crews involved performed marvelously.

Council Chow — Promptly at 5:16 p.m. a delicious Korean buffet was served. I'm quite sure all the faithful Council members and officers enjoyed the meal immensely.

Shame on You! Secretary John Kim reported a slight increase in membership for the State (18), however, *there are many delinquent in paying* dues. The delinquency amount is much more than last year's and as I mentioned last month, Maui County Society members have no reason to be delinquent. Please, please, let's make Maui *the* leader in HMA active membership.

Congratulations with Special Kudos: Would you believe that anyone would devote 37 consecutive long years to any organization? Well, the HMA Council presented our legal counsel, Tom Rice, a beautiful plaque for his dedication and legal expertise for 37 years. Tom, congratulations on a job well done and we hope to continue to see you and your legal associate, Vernon Woo, at the meetings.

Spouses: Our Strength . . . The Auxiliary (HMA) president, Emily Callan, reported that the organization has been active and members are looking forward to the 40th anniversary of their organization! Wonderful!

Lockjaw: A Standardized Lifetime Immunization Card was approved for general use, an endorsement by the HMA and the Department of Health. This form would be pocket-sized, personalized and used exclusively and permanently from birth on.

So What . . . Guess what, the Department of Health is working cooperatively with the CDC regarding a *survey* of adult immunization attitudes, beliefs and practices among Hawaii physicians. We are busy enough caring for our patients, let alone filling out another of the many survey requests we get daily. I objected to the validity, conclusions and expense of such a survey. However, it was M/S/and barely passed to approve the survey.

Good News . . . The Council approved a study proposal to subsidize each of the County Medical Society Delegates who attend the Annual HMA Meeting and come from another county. It's hoped that this subsidy will improve delegate attendance and participation at the meetings.

Tip of the Month: The best Bluepoint oyster can be found at the Fishmonger's Wife at Ala Moana Center. While on Maui, try the most delicious laulau dinner at the Maui Boy Restaurant on Vineyard Street.

Denis J. Fu, MD
Councilor, Maui County Medical Society

Trichinosis Following Ingestion of Wild Pig in Hawaii:
A Case Report

Sukchai Satta, MD*

A survey of domestic and wild hogs on the Island of Hawaii showed 2% of the former and 15% of the latter to be infested by Trichinella. From 1936 to 1964 the Hawaii State Department of Health reported 112 cases of Trichinosis in humans in which the suspected source was the eating of wild pig[1].

Case Report

A 31-year-old Hawaiian man was admitted to the hospital because of fever, chills, red eyes, headache, abdominal discomfort and muscle ache. The patient stated that he was well until the day of admission when he became ill with red and painful eyes. He was initially given Tylenol with Codeine and was sent home. After he had taken two tablets of Tylenol with Codeine, he passed out, injuring his chest, and had lacerations on his chin. His urine showed casts and many WBCs and RBCs. The patient was subsequently admitted to the hospital with a preliminary diagnosis of possible acute pyelonephritis.

On further inquiry, the patient stated that he had eaten barbecued wild pig meat, which was not well cooked, about two weeks prior to the illness. He stated that three persons who had eaten the same barbecued meat also suffered a similar illness.

On examination at admission, he appeared to be ill and febrile with a temperature of 103°F. His neck was supple. He had suffusion and subconjunctival hemorrhage in both eyes with pain on eye movement. Cardiac examination showed sinus tachycardia. Lungs were clear to auscultation. Abdomen, liver and spleen were negative to examination. The skin was negative for any rash. The extremities were normal.

The patient spiked a fever during the hospitalization with temperatures running between 101°F and 105°F. He suffered from prostration.

Laboratory findings: CPK: 800 to 4,350 with 4% CPK MB bands. Blood culture was done four times, all negative. Urine culture was negative. Stool culture was negative. Spinal tap: Protein and sugar were within normal limits, cell count revealed only 1 and it was a mononuclear cell. Urine examination showed many RBCs and WBCs. CBC: WBC 10,700, 41% polys, 25% bands, lymphocytes 12%, monocytes 2% eosinophils 15%. EKG showed normal sinus rhythm without any abnormality. Febrile agglutination tests, including leptospirosis agglutination test, were all negative. Liver function test showed SGOT 49, LDH 238, alkphos 62, SGPT 55, GGTP 73. Bentonite fluocculation test for Trichinella was positive 1:10. (Titer more than 1:5 is diagnostic of Trichinella infection.)

The patient continued to be febrile with prostration. He developed muscle aches, especially in the calf muscles. A gastrocnemius muscle biopsy was done and showed prominent foci of granulomatous reaction and muscle fiber degeneration. This focus consisted of lymphocytes and plasma cells, polymorphonuclear cells and macrophages. Tissue eosinophils were seen but rarely. There was one partially formed microcyst that contained what appeared to be cross sections of Trichinella spiralis larvae.

The pathology report: "Gastrocnemius muscle biopsy showing multifocal granulomatous reaction, strongly suggestive of Trichinosis."

The patient was treated with one gram of Thiabendazol b.i.d. for one week. Later, prednisone was added for possible myocarditis, and because of the worsening condition of the patient. The patient, however, gradually improved and was discharged home. No follow-up was done because the patient moved out of town.

Discussion

There were four persons who had eaten barbecued wild pigs: the patient, his wife and two friends. The patient's wife had mild symptoms of fever, headache and bodyache, but didn't seek medical treatment. The friends (husband and wife) were seen and treated in the office for abdominal cramps, loose bowel movements, eye pain and aching of the muscles of the shoulders, thighs, and legs. Both had no fever and no eye symptoms or signs. Both patients had eosinophilia of 33% and 50% respectively. Serum Trichinella antibodies were 1:20 and 1:40 respectively. They were treated with Thiabendazol 500 mg. t.i.d. for one week, and followed-up two weeks later. One was asymptomatic, the other still had some headaches, but no other complaints.

The presented patient had a positive Bentonite flocculation test, which is a serologic method preferred for the diagnosis of Trichinosis; it is apparently sensitive and specific[2]. The muscle biopsy was done prior to receiving the results of the flocculation test and was compatible with the diagnosis of Trichinosis. However, not all of the patients who ate the meat that was infested with Trichinella spiralis experienced illness. In one previous report, only 45% out of all the people who ate meat infested with Trichina experienced Trichinosis[3].

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REFERENCES

1. Alicata JE: Parasitic Infections of Man and Animals in Hawaii. *Hawaii Agricultural Experiment Station Technical Bulletin* 61:92, 1974.
2. Cagin IG: Current Status of Serology Testing for Parasitic disease. *Hospital Practice* 9:157-163, 1974.
3. Barrett-Connor E, Davis CF, Hamburger RN, and Cagan I: Epidemic of Trichinosis After Ingestion of Wild Pig in Hawaii, *Journal of Infectious Disease,* Vol. 133 #4, April 1976.

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Observation: A useful tool or a relic from the past?

John W. Pearson, MD*

"Observation" of applicants to their medical staffs is required in many hospitals of this community. This means that, when a new member wishes to perform procedures, he must be observed in person by a current member of the medical staff in good standing. More rarely, established members of the staff are observed doing some particular procedure(s), after having taken special instruction in such work.

Introduction

This physical observation is ordinarily applied to staff members whose work is largely procedural in nature. Thus surgeons, obstetricians, anesthesiologists, emergency physicians and neonatologists are usually required to undergo observation. Applicants whose work is largely of a cognitive nature are rarely observed in this way; such include internists, psychiatrists, pediatricians, and oncologists.

Personal or physical observation is applied to new members of the medical staff who have, presumably, passed scrutiny by the credentials committee of the hospitals, as well as met the approval of the chief of the service, the medical executive committee, the hospital president, and the board of trustees. Any one of these may deny or delay approval of medical staff privileges. The apparent rationale for observation is to guarantee some basic and satisfactory procedural performance by the new staff member, before letting him or her loose on an unlimited series of patients in a less closely monitored environment. The system of observation seems to have been designed as part of the quality control mechanism for the medical staff.

Let us examine this system of personal observation, to see whether the system is effective in practice; whether it should be extended to include the cognitive specialties; whether the system should be revised to avoid charges of harassment and potential restriant of business; whether it can be re-designed to be more effective; whether it should be extended to staff members who return after serious illness; whether it ought not to be applied to medical staff members on a regular, periodic basis, perhaps more frequently after the age of, say, 60; and, whether the system is needed at all.

I. Effectiveness in Practice

Have there been valid scientific studies of the effectiveness of this personal observation process as applied to new members of the medical staff? I have not investigated this, and I am probably in good company in relying on instinct or tradition! I do not know of a case in which observation turned up seriously substandard performance, and in which this result could not have been expected from a more careful credential process. The credentials of a candidate must include the scope of the work which he or she is capable of performing, by training and by experience. These credentials must fulfill three criteria: They must show a *satisfactory* standard, they must be *recent*, and they must be *verified*.

It should be noted the ICAHC standards do not require observation, but common sense and professional responsibility require that new members of the medical staff be carefully screened by the credentials committee using any acceptable and valid process (implementation in 1989 of the Health Care Quality Improvement Act of 1986 will essentially require hospitals to check with the national data bank before either appointing a physician to its staff, or even for the periodic renewal of privileges). In any case, a candidate who does not meet reasonable standards for medical staff membership should not be allowed to practice in the hospital, even under observation.

An elderly surgeon was deemed by an observer to be substandard in performance. A check later revealed that, whereas he had performed numerous procedures during his career, few had been done within the last several years, and that recent performance in another state had left much to be desired.

A surgical specialist passed observation, but later had privileges revoked for what amounted to a psychopatic personality disorder. No case of his was an absolute disaster, nor did any case ever go entirely smoothly. It took much effort to get this physician off the staff. A check on previous work records revealed personality problems aplenty. If a more careful credential search could not have revealed this, the short observation process certainly did not uncover the problem either.

An anesthesiologist had an episode such that the observer considered it grave enough to recommend summary removal of privileges. The candidate's credentials were in order. The episode, on later scrutiny, did not seem nearly as grave as it had at first appeared to the observer, who might be said to have felt threatened economically by the candidate. The candidate later performed several thousand anesthesia cases elsewhere with no unusual problems.

These examples are of anecdotal value only. They do not say that direct observation is useless. They merely suggest that, as currently applied, it is rather inefficient, and that perhaps the investigative work of the credentials committees must be more thorough. If direct observation of new medical staff members is to be retained, it needs to be improved.

(Continued)

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II. For Cognitive Specialties

Why do surgeons have to be observed, and not psychiatrists? Why must anesthesiologists be observed, and not dermatologists? In the operating room, with people all around wearing caps and masks, it is hard for a patient to be aware of the presence of an observer, and impossible once general anesthesia is induced. Yet, would the patient really object? Observation in the cognitive specialties is harder to do without intruding on the doctor-patient relationships. However, internists and psychiatrists seem to have little problem with getting their patients to agree to medical student observers. (Of course, the FAA often places inspectors in the cockpit of scheduled commercial flights. Does this not increase rather than decrease the public confidence in commercial aviation? It might well be good publicity for a hospital to declare that its physicians underwent objective observation as an ongoing and random quality control measure!)

Are physicians in the cognitive specialties so inherently more competent that direct observation is not needed? Or is the physician-patient relationship so unimportant as a cause of malpractice claims, or as a standard of quality, that no basic performance standard is deemed necessary? Why no personal observation? The practice of not observing these physicians seems to indicate either that their work is by its nature foolproof, or that they are unable to damage any patient, no matter how gauche or incompetent they may be! Or maybe nobody bothered to design an effective method, nor to draw up objective criteria.

III. Harassment of the Newcomer

One of the encounters that new members of the medical staff find most burdensome is getting an observer for a procedure that they wish to perform. (Two different physicians have expressed this to me in the last month alone.) Clear rules for the observation process are rarely available for the candidate. When he has called all the observers on the "list" and drawn a blank, he must now appeal to the department chairman or to the chief of the medical staff. If the physician is told to reschedule his case, he has the burden of explaining this to his patient. If he is told that he can do the case, but "that it won't count," he is punished by having to go through the whole process once again, and his ability to treat patients without the observation requirement is further delayed. The "it won't count" response is common when an emergency procedure is to be performed at night, on a holiday, or the weekend, and seriously argues against the honesty of purpose of the whole rigmarole.

Some hospitals have a policy of not permitting emergency work by a candidate until he has first performed elective procedures under observation. But the new solo practitioner in the community is likely to get much of his early work in emergency situations where the patient's regular physician is busy or otherwise unavailable. If the new candidate is a member of a group, he can get cases fed to him by other group members, just so as to get observation out of the way expeditiously. The solo practitioner has no such advantage, and is thereby discriminated against. The process of observation, intentionally or not, therefore works against the newcomer developing a solo practice.

The process of observation is assumed to be for the benefit of the hospital, in that it permits the hospital to avoid appointing physicians to the medical staff on a "permanent" basis who are not up to some satisfactory standard of competence. This, of course, is to the patient's benefit. It has never been claimed, so far as I know, that the process of observation is for the benefit of the person being observed. On the other hand, it is also to the hospital's benefit to make it easy for a new surgeon e.g., to get on the staff (and bring in more patients). It would seem, therefore, that the process would be made easy, or even automatic, for the new physician. Quite the contrary! In almost all cases, the new applicant must find someone from a list of "observers" supplied to him, with the proviso, usually, that no observer may observe more than one case. Sometimes the surgical-suite scheduling person will arrange for the observer, but usually only if one week's prior notice is given.

A person who seeks privileges and is a member of a group may have little difficulty if other members of the group are permitted to observe him, because the sooner observation is finished the sooner this person can take his place on a call roster. If observation by a partner or a member of the same group is not permitted, as most often it is not, then for a member of a large group the process is made harder, because the list of possible observers is made that much shorter.

What about observation in the smaller hospital where perhaps only one or two observers are available? If they render an adverse report, may this not be construed as biased in that they want no competition? Or do they give unreasonably glowing reports because they fear such accusation?

The usual lack of observation requirements for radiologists and pathologists must be considered under the fairness approach. It raises the question of unfair discrimination against other procedure-oriented physicians. Also, since radiology and pathology are usually performed by a group under exclusive contract with a hospital, it would seem that quality assurance is the more needed, since competitive forces are absent. The non-observation of the cognitive specialties should also be considered from this point of view of fairness to others.

IV. Sampling

The observation process must be regarded as a sampling system to ensure quality control, a reasonable performance standard for new members of the medical staff. Is it well designed for this purpose? There is no evidence that modern statistical methods for sampling have been applied to the observation process, but, on the other hand, I have no evidence that such application would improve matters.

Some hospital rules suggest that, for each candidate, five different procedures are to be obvserved, each by a different observer. Is this better than observing the same procedure five times? Does the observation of one spinal, one Bier block, one intubation, one chest case, and at least one major abdominal case provide a good evaluation of an anesthesiologist's work? Might it not be more rational to sample five intubations, or five spinals?

Part of the work of the more proceduarl specialists is cognitive, such as history taking, the physical examination, the assessment of the clinical problem and follow-up care. These aspects, as well as the interpersonal relationships between the applicant, his patient and members of the hospital staff are not explicitly measured. Observers' reports are usually sealed and turned in at the end of the particular procedure, so that the quality of outcome is not measured by this process.

As has been mentioned elsewhere, observation is often waived in a particular instance when the case is an emergency, when it occurs at night, or on a weekend. This seems absolutely wrong. It is a better test in judging the quality of a person's work, to view his performance when he is under some stress. Is not the management of an emergency GI hemorrhage more a test of a surgeon's skill than an elective varicose vein stripping? In actual practice, the availability and the convenience of the observer seem to be factors of greater importance. This is intolerable!

If observation is only for strictly procedural performances, the process must be aimed accurately. Several samples of one

procedure would seem logical. If, on the other hand, overall performance is the object of scrutiny, then the whole course of the patient's hospital stay must be examined with respect to the particular physician's performance. It seems clear that at present the observation process lacks a proper focus.

V. The Impaired Physician

No hospital bylaws that I know of, with one exception, have any provision for the observation of a member of the medical staff who returns to work after an illness. No hospital, with the same exception, has any provision for requesting a medical certificate of fitness after an illness. How can we say that we take quality assurance seriously?

A general surgeon suffered an open tibial fracture, and was away from work for almost a year. There was no mechanism in place for observation when he returned to hospital work. An obstetrician underwent a coronary bypass graft, complicated by a small stroke. When this doctor returned to do surgical procedures, there was no automatic system in place for checking his physical or mental ability to do so. A certification of satisfactory performance would serve to protect both the hospital and the physician if, in a subsequent malpractice suit, ill-health were cited as a cause for alleged substandard care.

The one exception, that I know of, to this sorry state of affairs is at Castle Medical Center. According to its new medical staff bylaws, a physician returning after hospitalization of more than three weeks, or after absence because of illness of more than six weeks, must apply for reinstatement on the medical staff at least one week before the date on which he or she wishes to resume work. The hospital then may require that a medical certificate be provided, and may require observation. This seems to indicate a real concern about quality performance, and it will be interesting to see how it works out in practice.

Would it be reasonable to subject a physician to observation automatically on attaining a certain age?

VI. Regular, Periodic Observation?

If observation is a valid method of quality assurance, it seems illogical to subject an applicant to this when he joins the medical staff soon after completing a residency training program, and never again during his medical career unless he clearly becomes incompetent. Slow deterioration of performance, gradual failure to keep up with new knowledge and new procedures, may be hard to determine solely by non-observational methods. (Periodic and regular testing of commercial pilots is generally accepted as being essential. Pilots at least have the incentive that failure means that they go down with their craft and hit the ground first; passengers often survive in some numbers. Physicians generally do not go down with their patients!)

It would seem that arguments against periodic observation are mainly logistical, and of the nature of wishing to avoid a personal confrontation with someone we know. It is easier, for example, to impose such a requirement on a new, little known member of the medical staff than on a colleague who has been active in the hospital for many years. While on this line of argument, is there not clear medical evidence that both mental and physical facilities deteriorate with age, and that somehwere generally between the ages of 55 and 65 such failing seems to become more visible? If there is a case for regular, periodic observation of members of the medical staff, then the interval might reasonably be shortened after, say, the age of 60.

Discussion

VII. Is Observation Really Needed?

Serious questions about the effectiveness, the fairness, the lack of uniform application of observation have been raised. These questions must be answered. As a technique, can observation be improved so as to make it useful? Can it be applied fairly so as not to provoke charges of restraint of trade? For if such a charge were sustained, the penalties for antitrust activity are substantial, and not only in legal expenses. Above all, is observation necessary?

For the new member of the medical staff, a careful and thorough examination of the candidate's credentials would seem to make observation almost unnecessary. If it is still thought to be essential, then it must not be a burden on the candidate. Quality of care must be the only criterion for requiring observation. The difficulty of finding observers at short notice or at night does not seem to be a legitimate reason for complicating a process that provides the candidate with no direct benefit. In fact, since observation is for the benefit of the patient and the hospital, an observer ought to be provided *automatically, on demand* and *no requirement for the physician to select or obtain his own observer.* The choice of the observers must be done fairly, and an observer must be available when called at all times, and above all for emergency cases.

One community hospital does not have a requirement for physical observation for anesthesiologists doing adult anethesia, and has not had such a requirement for over 15 years. There has been no disaster on this account. At this particular hospital the records of a new member of the anesthesia department are carefully scrutinized by a quality assurance committee after at least 10 anesthetics have been given. In addition, informal assessment of performance is solicited from surgeons and nurses who have had contact with the candidate. Any adverse report would trigger more detailed investigation as well as continuation of the close scrutiny. This system has worked at least as well as formal physician observation, at less cost in time and much less in aggravation.

What is to be observed? Is observation to be limited strictly to procedures? Is the process effective? Is there truly, not even a single surgeon or anethesiologist in the community who is well known for being almost hopelessly clumsy with his hands? What happened when he or she was observed? Can all other aspects of a physician's performance be judged in other ways, but procedures only by direct observation? We must define clearly what standards are acceptable, and apply observation with these objective standards clearly in mind.

While careful examination of the credentials of a new medical staff applicant may make observation almost superfluous, the situation is probably very different in the case of a physician who has been a member of the staff for a number of years. A plea has been made earlier for requiring observation when a physician returns after a serious illness. Would not periodic observation be a reasonable tool with which to monitor quality of care throughout a physician's career as a member of the medical staff? If such is deemed reasonable or desirable, we should set up the process without delay. Objective criteria for this must be established, and performance measured against such standards. These standards would differ in each specialty, and would have to be updated periodically. The logistics must also be worked out. Realistic observation would demand that all aspects of patient care be observed — each patient contact, each contact with the patient's family, each contact with other physicians, each interaction with the nursing staff. Are we ready for this? Is it needed? Is it logistically feasible? This is quite a task, and, if impossible, then we have one more reason to abandon the practice.

Must observation be performed only by physicians? Does not the idea of peer review demand this? No! "Peer review" only demands that the evaluation of the observers' reports be done by one's peers. So, can't a surgeon observe an anethesiologist or

(Continued on page 389)

Health Care in Hawaii*

Richard Davi**

Thank you for this opportunity to speak today about an industry that traditionally has not focused on strategic and corporate planning but suddenly finds itself immersed in it.

Health care has attracted a lot of attention in recent times. This is largely because health care is big business. It is the third-largest industry in the U.S.A. It consumed 11.2% of the gross national product, or $489 billion, in 1987. Its expenditures are expected to increase by 9% in 1988.

In Hawaii, health-care expenditures for 1986 were at 11% or $1.96 billion. This amount is slightly more than total construction completions in the same period, on a par with total federal defense expenditures in the State, and nearly double the agriculture expenditures.

Further, our industry employs more than 26,000 people, including over 2,000 physicians, and a few of our hospitals are among the top 10 employers in the State. I offer these statistics as a means of providing you with a perception of the magnitude of our industry and its impact on the economy of this state. We can be truly classified as big business.

However, it is also an industry that is facing pressures on many fronts. Pervasive and varied influences are bringing about dramatic changes. We find that considerable time, money, and effort are being expended to find new ways to finance health care, in order to moderate its costs. The structure of many health-care institutions is changing through corporate reorganizations, to resemble more closely the traditional organizational structures that have been adopted by businesses outside of health care. Consumers are being educated to make more prudent use of the health-care system; the emphasis is on "wellness," holistic health and ambulatory care. There is a trend to make health care a more "competitive" business — to allow patients, businesses and others who utilize and pay for health care to exercise more control of health-care providers, to identify where treatment is given and payment is made.

There is no question that the health-care industry and environment is changing both rapidly and dramatically. Further, it is continuing to change at a pace that even the full-time health professional has difficulty monitoring, let alone responding productively. On the positive side, these are exciting, challenging times for those of us involved in health care, filled with opportunities. On the negative side, these are dangerous times in which our very existence is threatened.

I would like to review with you some of the characteristics of today's health-care environment, population trends, and changing public expectations, that are leading to changes in the demand for services — most significantly, a decreased demand for patient services.

Hospital use has suddenly dropped after years of high occupancy rates, and the most probable long-term trend is a continuing decline.

To state that we are facing greater competition is an understatement! Hospitals are competing in a free-for-all environment. There are more competitors than ever before and a wider variety of competitors. Hospitals are not competing just with other hospitals. I'm talking about competitors such as outpatient surgery centers, emergency centers, ambulatory care centers, wellness centers . . . and on and on. You only have to look at a cover of a health-care journal, or even a business journal, to spot yet another source of competition.

Regulations and policies governing payment for medical care have undergone dramatic, rapid and frequent changes in the past three years. All of you have probably heard of Prospective Payment Systems (PPSs) and Diagnosis Related Groups (DRGs). Instead of reimbursement for costs incurred, regardless of the amount, the government is paying hospitals on a fixed-priced basis for specific types of ailments or surgical procedures. The hospital retains any savings if patient costs are below standard, and gets penalized if costs are above specified levels. In a relatively short time, prospective payment and "managed care" have already had a profound impact on how we view ourselves and how we manage.

For one thing, hospitals across the country are busily installing computer-based, cost accounting systems to track costs and to assist in understanding the impact of DRGs. Thought processes are changing. We think in terms of product lines, and are discovering how efficient we can be in production. To you, this change may sound elementary; for us it's actually revolutionary! I might add that I think these changes will be very positive in the long run. Let's hope that, in the process of all this change, we don't lose sight of the patient.

As a means of survival, a variety of strategies are being employed across the country to respond to the rapidly changing health-care environment. Briefly, some of these strategies include:

1—**Downsizing**, or finding the optimum level of operations that can be carried out profitably and with the fewest harmful effects on the quality of care. This is an appropriate strategy in areas of excess bed capacity. At this point, I can say that downsizing has not been necessary in Hawaii. Our ratio of acute care beds to the population is 2.4, compared to 4.5 for the nation as a whole. This is a positive situation for Hawaii.

2—A second strategy being used is that of becoming a **low-cost provider** of medical care, in order to compete on a price basis. We are finding that both locally and nationally, facilities are beginning to discount rates. This can be a dangerous strategy for facilities that adopt this approach before they have a clear and accurate picture of their true costs of providing a particular service.

3—**Increasing market share** is another major strategy being employed. It involves developing strong physician referral networks, increasing direct-marketing efforts and developing convenience-oriented services. In an environment of aggressive com-

* A presentation to the Honolulu Rotary Club, February 23, 1988.

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petition, efforts to increase market share may pay off for a few, well-located, aggressively managed hospitals. For the rest, the results of marketing efforts may, at best, just offset the loss of patients.

Health-care marketing in Hawaii is still in its infancy. Five years ago, hospitals did not have directors of marketing, and media advertising was virtually unheard of. Market share was relatively unimportant and, in most cases, the hospital administrator did not know his market share. Less than two years ago, the first syndicated health-care surveys appeared. As a result of these surveys, market-driven changes in the way we do business are emerging: Extending business hours to evenings and weekends, the development of satellite clinics, and greater emphasis on amenities such as improved decor and candlelight dinners for new parents. A hospital in Las Vegas offers Caribbean cruises for two if you win the drawing for weekend admissions.

4—Another major strategy involves becoming more specialized and developing **centers of special competency.** A few examples in Hawaii include Kapiolani Medical Center for Women & Children (KMCWC) as the State Regional, Perinatal Tertiary Care Center. We are the safest place to have a baby! Also, we're the only children's hospital in the State. At The Queen's Medical Center, centers of excellence include such services as open-heart surgery, cancer and trauma care; at St. Francis, home-care and hospice, organ transplants, and laser surgery; at Kuakini, care of the aged; and at Straub, a burn center, open-heart surgery.

The concept of centers of excellence makes sense from the standpoint of developing economies of scale and developing expertise by treating a high volume of the same kind of patient.

5—The next strategy, which you've been waiting to hear about, is that of **diversifying** into other businesses that may or may not be health-care related, in order to become less dependent on inpatient revenues.

Over the past five years, corporate restructuring, one step in the diversification process, has been a fad in the hospital industry. Restructuring emerged in response to regulatory and competitive pressures, to protect present and future assets, to respond to cost shifting. Some facilities are now finding that restructuring did more harm than good. The basic problems have been loss of control, undercapitalization and inadequate staffing.

KMCWC recently reorganized into a not-for-profit holding company model: Our medical center (which is not-for-profit), a not-for-profit foundation and a for-profit entity called "HICORD," under the umbrella of our not-for-profit parent holding company called Kapiolani Health Care Systems Inc.

Diversification means more than restructuring. For us, it means new businesses, new markets and new products. Key among these new activities for KMCWC are management consulting and contract management programs, acquisition of both health-care and nonhealth-care enterprises, possible development of a catastrophic insurance program, shared service programs and future real estate development. Let me share with you some of our present business activities:

- **Infotech:** A joint venture of a free-standing, data-information computer center between Straub and KMCWC.
- **Retirement Home:** A joint venture between KMCWC, a mainland firm and a local real estate developer group.
- **Laundry Service:** A venture between KMCWC, Kuakini, St. Francis and private interests.
- **Family Home Health Care Program:** Between St. Francis and KMCWC.

In the discussion stage is our possible entry into the collection agency business, ownership of a biomedical engineering program and an industrial medicine program.

The diversification strategy is closely related to the final strategy I'm going to discuss today, i.e., of **system building.**

The traditional American hospital has been a community-based, free-standing, not-for-profit enterprise, drawing upon local political and financial resources for its support. With the exception of a few large municipal hospital systems, most hospitals have developed in isolation from one another, both clinically and managerially. In the 1970s this fragmentation gave way to increasing cooperation. Early in the 1970s, when I was asked to assume management of Kauikeolani Children's Hospital, new opportunities became available through shared services and purchasing, which provided both facilities with an opportunity to achieve economies of scale. For us, this was just the beginning of an era of networking. In 1978, under an affiliation agreement, the two hospitals moved onto one site and became known as Kapiolani/Children's Medical Center, sharing common services and a common management under one roof. In 1984, the legal merger of the two facilities became a reality and Kapiolani Medical Center for Women & Children was born. I share this history because it represents the first health-care merger — or acquisition really — in Hawaii. In terms of specialty hospitals, KMCWC (maybe like Panasonic) was way ahead of its time. The strategy of combining forces to create a stronger entity was a necessary first step to future survival. In the '80s, the completely free-standing hospital is rapidly becoming a thing of the past. Today, over 80% of the nation's hospitals participate in some form of sharing of services. In addition, one out of every three hospitals is affiliated with a multi-institutional system. In five years, it will be every other hospital. By the year 2000, the market will be dominated by 25 to 30 multihealth corporations.

There appears to be five steps emerging in the system building process. The first, initial reorganizations, we've already discussed; the others include neighborhood mergers, regional mergers, mega-mergers and reorganization again. I use the term merger loosely, to define any sort of networking or affiliation.

You probably already know that KMCWC has recently affiliated with Kuakini, St. Francis and Straub medical centers. We have been working together for three years to create a local system. Under our planned consortium, each facility retains its own identity. We share services to achieve economies of scale and develop joint ventures as appropriate. Currently, the major activity of the consortium has been to develop a health maintenance organization (HMO). We are working with HMSA and 300 MDs on a joint venture and hope to be in the marketplace shortly.

We are moving in the direction of national networking as well. In conjunction with certain pediatric hospitals across the country, we are attempting to develop a master contract with the government, to provide health care for dependent children of military personnel.

At this point, it is fair to say that we have many irons in the fire. Because we have so many irons in the fire, it is an especially good time to take note of the many challenges facing us in our future. I believe these challenges exist for any health-care organization or system undergoing dramatic change.

In the case of Kapiolani, our various strategies are being undertaken to protect the future of the medical center, or, more precisely, to continue to protect our ability to provide high-quality health services to the women and children of Hawaii and the Pacific Basin. With the excitement and high energy levels associated with what has been termed "A-Deal-A-Day," it would be easy to lose sight of that purpose. The first challenge, then, is for us to keep our mission and purpose "for being" in sight.

It would be very easy for us to try to move in too many

(Continued on page 378)

Hemoglobin H Disease in Hawaii: Update 30 years later*

Robert T.S. Jim, MD**

One hundred seven cases of alpha thalassemia intermedia (hemoglobin H Disease) in Hawaii are reviewed with regard to incidence, ethnicity, clinical and laboratory variants and outcome.

Hemoglobin H disease, or alpha thalassemia intermedia, was first recognized and reported in the scientific literature in 1955.[1-3] The first case was found in Hawaii 30 years ago.[4] Since then, a total of 107 additional cases have been found. At the time of diagnosis, ages ranged from newborn to 83 years. Many cases were diagnosed over the age of 50. Both sexes appear equally affected (males 49, females 57). Most have occurred in the Filipino or Chinese groups (Filipino 69, Chinese 25, Hawaiian-Chinese 3, Hawaiian-Chinese-Caucasian 1, Hawaiian-Filipino-Chinese-English-German 1, Chinese-Filipino 1, Chinese-Filipino-Spanish-Portuguese 1, Chinese-Caucasian 1, Chinese-French-German 1, Filipino-Spanish 1, Filipino-Portuguese-Puerto Rican 1, Hawaiian-Puerto Rican-Fijian 1, Thai 1). In the mixed racial groups with Chinese or Filipinos, Hemoglobin H disease most likely was derived from these races. In the Hawaiian-Puerto Rican-Fijian group, the thalassemia gene most likely originated from the Fijian race. Thalassemia has not been seen in Hawaiians or Polynesians and is not prevalent among Puerto Ricans, Germans or French in Hawaii, although occasionally it is seen in the Portuguese and Spanish.[5] The Fijian is a race composed of a mixture of Polynesian and Melanesian stock.[6] The Melanesian is believed to have originated from Southeast Asia, where thalassemia is prevalent. Thalassemia has been found in Melanesia,[7] and Hemoglobin H in the Thai people.[3]

In the 107 patients with Hemoglobin H disease reported here, the clinical manifestations, despite a more heterogenous hematologic picture, appear more mild to moderate in severity and consistent with long survival (oldest survivor is 85). In 31 patients, 21 showed no hepato-splenomegaly, five only slight splenomegaly and four had moderate hepato-splenomegaly. Clinical and hematologic data in the first 13 patients have been published previously.[8] In the mildly anemic patients, higher than normal red blood counts (RBC) were found (up to 6.71 million/cmm). (See Appendix for normal RBC.) In 27 patients, the hemoglobin ranged from 7 to 13 grams. The discriminant function (DF) and MCV/RBC ratio in the more severely affected showed high values similar to iron deficiency. In the less severely affected patients, high RBC were found, many above the normal range; the DF and MCV/RBC ratio in these milder cases was more typical for thalassemia trait. The DF in five out of 20 patients and MCV/RBC ratio in eight out of 20 patients show negative or low values typically found in thalassemia trait. In four patients studied, the red cell distribution widths (RDW) were increased to 19.8, 22.3, 23.4 and 23.9 (normal 11.5-14.5). In 15 patients, Hemoglobin H comprised 2.3 to 23% of the total hemoglobin. in five out of 31 patients, a smaller amount of Bart's hemoglobin was found in addition to Hemoglobin H.[10] In two patients of Filipino extraction, G6PD deficiency was also found in addition to Hemoglobin H Disease."[11] The combined defects in these two patients did not mean a more severe hematologic picture.

Appendix

Normal RBC In Orientals in Hawaii

Race	No. Studied	Sex	Age in years	RBC x10⁶/cmm Data Source Range	Average	
Japanese	558	F	18-21	3.64-5.59	4.53	University of Hawaii
Chinese	53	F	18-21	3.65-5.36	4.53	Queen's Hospital
Korea	24	F	18-21	4.02-5.25	4.48	Schools of Nursing
Filipino	16	F	18-21	4.10-5.10	4.53	Honolulu (ref. 9)
					Median	
Chinese	33	M	Adults	4.50-5.40	4.92	St. Francis Hospital
Filipino	72	M	Adults	4.10-5.80	4.97	Employees,
Chinese	78	F	Adults	3.77-5.14	4.46	Honolulu
Filipino	81	F	Adults	3.92-5.00	4.43	(RBC performed by Coulter Counter)

While precise data on the incidence of alpha thalassemia is not available among the Chinese and Filipinos in Hawaii, large numbers of alpha thalassemia trait (alpha thal-1) have been seen. Hydrops fetalis or homozygous alpha thalassemia have been observed in the Chinese and Filipinos in Hawaii. In one Honolulu hospital over a five-year period, hydrops fetalis occurred in 13 Asian mothers.[12] Reduced alpha hemoglobin chain synthesis has been found in two patients with Hemoglobin H disease (alpha/beta ratios of 0.7 and 0.9) and four patients with alpha thalassemia-1 traits (alpha/beta ratios of 0.75-0.85; normal alpha beta ratio is 1.0-1/3).[13] In five Chinese patients with alpha thalassemia-1 trait, DNA analysis disclosed deletions of two alpha genes (--/$\alpha\alpha$) (deletion of the PsAlpha,[1] alpha 2 and alpha 1 genes) similar to deletions found in the Southeast Asia type of alpha thal-trait.[14] In one patient with Hemoglobin H disease (case 106), DNA analysis revealed absence of three alpha genes (--/$\alpha\alpha$).[15] In one hydrops fetalis case of Filipino ancestry, no alpha gene fragments could be identified in the DNA in the stillborn (--/--).[14]

(Continued on page 386)

* Presented at the St. Francis Hospital Hematology Conference, March 19, 1987.

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Update on Cancer Therapy

Kevin K. Loh, MD*

In the forthcoming issues of the JOURNAL, faculty members of the Clinical Department of the Cancer Research Center of Hawaii will contribute articles on current cancer management, with special emphasis on investigational protocol studies. We hope early dissemination of positive treatment results will encourage wider participation of patients from Hawaii. The Cancer Research Center of Hawaii, and the Clinical Trials Office of the Hawaii Medical Association are members of several major national Cooperative Groups concerned with the investigative treatment of cancer. Interested physicians with potentially eligible patients may contact the Clinical Unit of the Cancer Research Center at 548-8530 for further information.

Adjuvant Therapy for Breast Cancer

Survival of breast cancer patients following surgery has reached a plateau in the last 30 to 40 years. Initial efforts to improve surgical end-results were aimed at better local control of breast cancer through more radical surgical procedures or post-operative radiation therapy. Unfortunately, controlled clinical trials in the 1960s and early 1970s showed that super-radical surgery was not necessarily better than modified radical mastectomy in improving survival. Post-operative radiotherapy, though effective in decreasing chest wall and regional lymphatic recurrence, exerted little impact on subsequent survival. At around the same time, animal studies had shown that by the time most solid tumors were clinically apparent, systemic micrometastases had already occurred. It became obvious that effective therapy that could eradicate such micrometastases was needed in order for survival of breast cancer patients to improve further.

To select patients at high risk of subsequent relapse following surgical therapy, a set of prognostic factors were developed that correlated well with survival. The factors that correlate negatively with survival in breast cancer are the presence of metastatic lymph nodes in the axilla, low levels of estrogen and progesterone receptors in the tumor, poor histologic differentiation of cancer and a strong family history of breast cancer. With better understanding of breast cancer tumor biology and its natural history, systemic adjuvant therapy was started in earnest by the early 1970s. Some of the early definitive studies with adjuvant therapy were conducted by the National Surgical Adjuvant Breast Project (NSABP) in the United States, and by Bonnadonna in Milan, Italy. Initially, patients enrolled in these trials all had positive lymph nodes in the axilla at the time of definitive surgery, i.e., stage II disease. The trials started with a single chemotherapeutic agent such as Melphalan, and later progressed to the use of multiple drugs, e.g., cyclophosphamide, methotrexate, and 5-fluorouracil. Significant improvement in survival became evident in most of these studies. It was found that the best results were obtained if the chemotherapy was started early after surgery, i.e., within one to two weeks, and that the dosage of drugs administered be in adequate therapeutic range. The duration of therapy was also shortened to six months instead of the previous one year, thereby further decreasing long-term toxicity and increasing patient acceptability. It also became apparent that not all groups of breast cancer patients were benefited by adjuvant chemotherapy to the same degree. The subgroup that had the best results included the premenopausal patients with relatively few positive lymph nodes, i.e., 1-3. Early studies, in fact, showed no benefit from treatment in the postmenopausal patient groups. On the other hand, in the most favorably affected group, survival rates improved by 20% to 25%.

The routine availability and determination of estrogen and progesterone receptors in the primary tumors at the time of surgery also helped to segregate a group of patients more likely to respond to hormone manipulation. This concept was carried forward by the use of adjuvant anti-estrogen therapy, e.g., Tamoxifen, in the treatment of postmenopausal, receptor-positive stage II breast cancer. Studies in both North America and Europe have shown that adjuvant hormone therapy is indeed effective in prolonging disease-free survival in post-menopausal patients who had positive receptors at the time of surgery. Such an approach remains the standard of treatment today.

In view of the apparent success of adjuvant therapy in stage II breast cancer, the logical next step was to apply such treatment to earlier disease, i.e., in those patients with negative lymph nodes at the time of surgery, or stage I disease. Three Cooperative Group studies have recently matured enough for the National Cancer Institute to issue a definite statement recommending adjuvant therapy even for selected stage I patients. The NSABP and the Intergroup Study have found that chemotherapy in relatively high-risk stage I patients can improve survival by 9% to 17%. The use of Tamoxifen in receptor-positive stage I patients also improves survival by 5%. The follow-up period in these carefully controlled clinical trials is still short, at three to four years; however, the differences in survival curves are quite definite and confirm the results of more mature studies completed in Europe.

Some unresolved issues in adjuvant therapy in breast cancer remain, however, and include the use of chemotherapy prior to surgery, i.e., Neoadjuvant therapy, the use of combined chemotherapy and hormonal agents, the proper integration of post-operative radiation therapy, and the most effective combination of chemotherapeutic agents and duration of treatment. We can hope that continued carefully controlled clinical trials will answer these questions in the near future.

Optimal current management of breast cancer requires a combined multimodal approach. The development of such a planning clinic for breast cancer treatment may assure patients that they will receive what comes out of the latest in concepts and improvements in cancer therapy.

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HMA Committee Reports

Channelling? Not the Shirley Maclaine type — but the Project Malama[1] kind, which is real.

Dorothy Ono, director of the project, told the *Chronic Illness and Aging Committee* that her agency, which is supported by county, state, and federal funds ". . . to care for, to keep, to preserve, to observe . . .," works with severely impaired people aged 60 or over who need help in areas such as feeding, dressing, meal preparation, housekeeping, shopping, etc.

The seven skilled case managers channel clients to agencies who are able to provide such services. They develop a plan, make the referrals and monitor the clients "to be sure that health and safety needs are met and that the client progresses as expected . . ."

It was gratifying to learn that, in the paraphrased words of Shakespeare, ". . . from hour to hour, we ripe and ripe . . . from hour to hour, we rot and rot . . .,"[2] that there is Project Malama to get for us oldsters persons who can feed, cleanse, dress, and take us to the toilet.[1]

Dr. Jeanette Takemura of the State Executive Office of Aging provided the committee with an unexpected and surprising bit of information: Money is not the major problem in providing care — it's the lack of people in Hawaii to provide it.

Samuel D. Allison, MD
Committee member

1. Project Malama
   810 N. Vineyard Blvd.
   Ph: 847-2064
2. *As you Like It* II, vii, 26

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directions at one time, accomplishing little. *The challenge is to maintain a focus and sense of priorities.* To do this, I think the development of a clear, action-oriented, strategic plan, which specifies the parameters for new ventures, is essential. Of course, we need the flexibility to respond to opportunities as they emerge; yet we need to increase our wisdom and be able to identify as efficiently as possible those opportunities which are appropriate and those which are inappropriate.

Our second challenge involves balancing resources — human as well as financial resources. On the human resources side, a sense of balance must be achieved and maintained between corporate and operational staff. At the corporate level, I find I am hiring people with skills not traditionally found in the not-for-profit community hospital. They are skills that you as corporate planners are already familiar with — marketing, finance and business development. Many times these newcomers have no health-care experience. Corporate staff will need to understand the philanthropic basis of the hospital charter.

On the other hand, the operational staff will need to understand and adopt the entrepreneurial spirit, which is very different from the traditional, not-for-profit approach. Corporate and operational staff must work together if the goals of our health-care system are to be achieved. Another aspect of balancing resources, I believe, is particularly difficult, yet extremely important in the early stages of corporate development. Specifically, we need to guard against draining the human and financial resources of our medical center in the course of building the corporate image. We must not expand our corporate staff too rapidly. Otherwise, supporting "corporate" activities will become a burden in and of itself.

A third challenge will be acquiring capital for new business ventures. As the result of the environmental changes already described to you (decreased census, rate restraints), hospitals are no longer considered good financial risks and obtaining venture capital could become difficult.

The fourth challenge is a function of size and complexity. As we develop new ventures and new institutional relationships, I guarantee that turf and control among players will emerge as a problem. Of course, there are ways of dealing with this, such as a careful selection of staff and board members. Nevertheless, control will be an issue.

The challenges I've mentioned do not represent an exhaustive list. Other challenges include identifying market segments, opportunities and competition, and defining new markets and services. However, I see them as some of the major challenges facing health-care systems today.

In conclusion, let me state that there are no easy answers or solutions facing the health-care industry in the future. If there were, they would have surfaced by now. One thing is certain, the health-care industry is hard at work developing innovative approaches to deal with the challenges ahead and I am excited about the opportunity to contribute to the industry's "new look" of the future.

Clinical Pathologist's Easy Chair

FRANCIS H. FUKUNAGA, MD

Lupus Anticoagulants

The lupus anticoagulant was first described in patients with systemic lupus erythematosis[1]. The name, however, is a misnomer since it is not limited to patients with SLE and it does not interfere with hemostasis. It has been described in a number of other clinical conditions besides SLE and other autoimmune diseases such as in drug therapy (chlorpromazine, procainamide)[2], infectious diseases (often in pediatric population associated with viral infections), malignancy, pregnancy, and in some otherwise asymptomatic apparently healthy individuals.

Although it was first described as a hemorrhagic disorder[1], it is now accepted that there is no clinical bleeding unless it is accompanied by thrombocytopenia, hypoprothrombinemia, platelet functional abnormality or an underlying coagulopathy. It is called an anticoagulant because of its in-vitro activity but it is often clinically associated with thrombosis (about 50%)[3]. The thrombotic episodes may be single or recurrent and is more often venous than arterial.

The patients are usually identified by a prolonged aPTT. The anticoagulants are immunoglobulins (IgG or IgM) that interfere with all phospholipid dependent coagulation assays such as the prothrombin time, aPTT, Russell's viper venom time and whole blood clotting time.

Lupus anticoagulant should be considered when there is venous or arterial thrombosis, thrombocytopenia and pulmonary hypertension. It was believed to be a cause of frequent spontaneous abortions but recent studies do not confirm this impression[4].

Laboratory findings include a normal or only slightly prolonged prothrombin time, a markedly prolonged aPTT and normal thrombin time. Failure to correct the aPTT of a 1:1 mixture of normal and patient's plasma is indicative of an inhibitor (lupus anticoagulant). If the prolonged aPTT was due to a factor deficiency, the 1:1 mixture will correct the aPTT.

REFERENCES

1. Conley CL and Hartmann RC: A hemorrhagic disorder caused by circulating anticoagulant in patients with disseminated lupus erythematosis. *J Clin Invest:* 31:621-622, 1952.
2. Schoen RT and Trenthane DE: Drug induced lupus: An adjuvant disease? *Amer J Med:* 71:5-8, 1981.
3. Elias M and Eldor A: Thromboembolism in patients with the "lupus" type circulating anticoagulant. *Arch Intern Med:* 144:510-515, 1984.
4. Liote F et al: Recurrent thrombosis and lupus anticoagulant in systemic lupus erythematosis. *Arch Intern Med:* 146:1247, 1986.

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J.I. FREDERICK REPPUN, MD

The Differential in Fees

The Health Care Financial Administration (HCFA) of the federal Department of Health & Human Services (DHHS) has entered in the *Federal Register* a proposal to eliminate the differential in fees between work done by specialists and that done by primary-care physicians. It is asking for comment to be submitted by physicians nationwide during a period ending June 13, 1988.

The following is what I have submitted, for my part, as an individual practitioner in the profession. It is a presumption on my part that other practitioners in our community have also received a similar "request for comment" from HCFA. Although the deadline will have long been passed by the time the readers of the JOURNAL get to see "one man's opinion," it may stimulate an awareness of what might be coming down the tube:

The American Academy of Family Physicians (AAFP), of which I have been a member for 34 years, has supplied me with information needed to evaluate the proposed 'new' regulations pertaining to eliminating prevailing fee differentials based on physician speciality. The notice in the *Federal Register* requests comments from interested parties.

I am very much in favor of the proposed change in the regulations.

First off, I need to tell you whence I speak. I am a general practitioner (GP), not a specialist in Family Practice (FP), although in my 49 years of practice since graduating from Harvard Medical school I have done major surgery, delivered babies, cared for the sick and injured from cradle to grave and practiced "preventive" maintenance medicine. For the past 25+ years I have practiced with the same one partner in a suburban community 12 miles away from the center of a city of 800,000 people and five miles from the nearest hospital, of which I have been chief of staff in the past. I have been active as a member of the Honolulu County Medical Society, Hawaii Medical Association and the AMA, serving on many committees thereof. Since 1985 I have been the editor of the monthly *Hawaii Medical Journal,* and was contributing editor for nearly 30 years before that. I sit on the council of the Hawaii Chapter AAFP and have been an officer and president in the past.

My contention has always been that *LIKE SERVICE DESERVES LIKE COMPENSATION* but since the practice of medicine is more art than science, it would be impossible, nay foolish, to try to base compensation according to a precise and rigid schedule of fees. Training plus reputation elicit a value and worth above that of the common physician. Specialty training and certification are designed to guarantee to the general public — the patients on whom physicians will be "practicing" (every case is a learning experience aimed at "practice makes perfect" over a lifetime!) — that "quality" has been standardized. Every patient has the right to expect similar high quality of service from every physician. However, this is not an unadulterated benefit, because the equation also has in it the component of personal differences within each practitioner, generalist or spe-

(Continued)



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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose

Skin rash has been reported rarely

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.

2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml

3. Correction of acidosis, if present, with intravenous sodium bicarbonate.

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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cialist alike. Some are "better" than others; some are not as "good" as others. Therein lies the crux of the current dilemma as regards to litigation over whether it was "maloccurence" or was it actual "malpractice" when the things did not turn out as hoped for, or as expected, or what the general public now comes to feel should be "guaranteed." My obstetrics mentor at the Boston Lying-in, because of his status and reputation, was said to refuse more than 12 deliveries a year at a fee of $1,000 each (he also did a great many for zero fee!) His babies came into the world no differently than did those for the thousands of other obstetricians, GPs and midwives, many of whom, in those days, charged $50 or, at the most, $100.

Nor can fees be based on the stop-watch. One surgeon may perform a perfect appendectomy in 20 minutes; another may take 90 minutes, with an equally good outcome. Would it be fair for one to be paid $200 and the other $900? Or, should the first one get the $900 because of his speed and expertise, while the second one is penalized at the same rate for costing the hospital and the insurance carrier or Medicare or Medicaid the value of those extra minutes?

Nevertheless, some method of compensation needs to be structured, if only to assure patients that they are being fairly treated and not overcharged (unless the patient insists on preferential treatment). It is needed by third-party payors to be assured that they are not being "gouged" and doctors themselves need to know what other doctors charge, since each is vitally concerned with the health of the patient's pocketbook, nearly as much as he is with the patient's physical and mental health. On referrals from a primary physician to a specialist, this is a concern.

Since 1970, when it was first devised after prolonged work, the Hawaii RVS (Relative Value Study), has been our local "bible." The variable is the Conversion Factor (CF), which was meant to change with the rise in the cost of living and the rise of the cost of doing business. The RVS was meant to be adjusted every few years, as new procedures came into being, others were outmoded and discarded and revisions in relativity between one procedure and another were reviewed and accepted.

Unfortunately, surveys taken with a view to obtaining a consensus from the community's physicians were outlawed by the government under the specious reasoning that it was "collusion" — an antitrust no-no! So, we were never allowed to update and streamline our Hawaii RVS. Third parties have been stymied by this governmental decree as well; even the government itself in Medicare and Medicaid was stymied, but pulled an end-run by fiat for its own benefit. The result has been that physicians have largely become indentured servants of the government — something over which the American Revolution was fought and won more than 200 years ago!

Now, to get down to specifics, only a few of which I shall cite:

1—It is unfair for third parties to deny an FP or a GP or an internist or a surgeon compensation for that physician's taking the time to counsel with the patient on his or her "mental illness," simply because the physician is not a psychiatrist. Even psychiatrists will grant that most psychiatric illness can well be managed by primary-care physicians (PCP) or by LMDs (local Medical Doctors, as they used to be called), namely the family's personal physician. The current regulations tend to foster referral, at a considerably increased expense, to "specialists," i.e., psychiatrists. Like work deserves like compensation, say we. We do it now anyway — the counselling for an extra hour or more — "for free"; does the government have a right to force us to do this for free? Does the government have the right to force us to refer the patient to an unfamiliar (to the patient) specialist?

(Continued on page 386)





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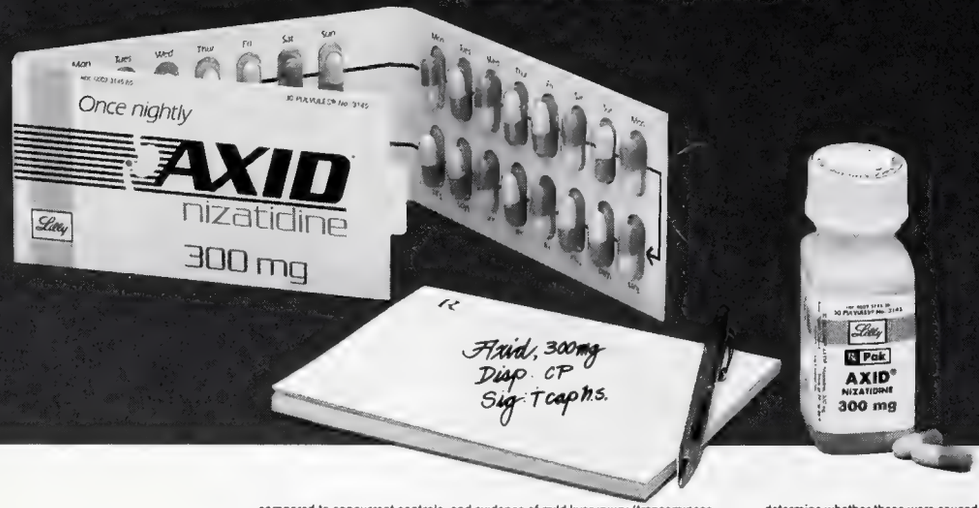
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duodenal ulcer therapy available in a

Unique Convenience Pak

for better patient compliance



AXID®
nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers

Pediatric Use—Safety and effectiveness in children have not been established

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

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Eli Lilly and Company
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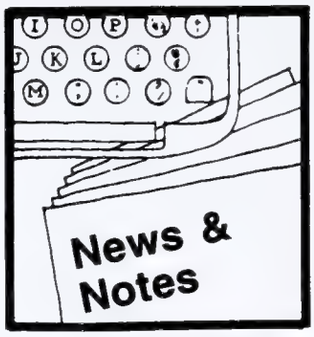
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Entrepreneurs . . .

The Kauai Medical Group Inc. plans a $7.89 million building next to Wilcox Memorial Hospital scheduled for completion in mid-1989 when the Group's current lease expires . . . The 48,000-square-foot building will be on a 1.3-acre site leased from the hospital for 65 years and can accommodate 32 physicians and provide more than 100 examination rooms.

Clinical neuro-psychologist Robert Speers wants to convert his 15,483-square-foot home on Elelupe Road in Kuliouou to an adult day-care center for 12 patients and 10 workers, but Kuliouou residents opposed the facility in a public hearing in March . . .

Maui physician Ron Kwon and investment adviser James Dezendorf are seeking funds to set up a nonprofit community organization to run Maui Memorial Hospital . . . They are supported by the Maui County Medical Society and the HMA . . . Ron helped start an HMO for solo practitioners in the Boston area and was on a committee that oversaw the $20 million renovation of a private community hospital near Boston threatened with takeover by a larger hospital . . .

The Aloha Health Care Ltd. facility in Kaneohe with 120 beds is up for sale for $12 million . . . The developer, Heritage Health Group Inc. of Cleveland, Tenn., has decided to sell the facility, which was scheduled to be completed last month . . .

In late April, the Kona-Kohala Health Care's $1 million makai medical facility opened in the Lanihau Center Shopping Complex. The Kona-Kohala Health Care, a 12-physician medical group, had joined The Queen's Medical Center in the joint venture . . .

Elected, Honored & Appointed

"Terry Gerritsen of Kaiser Clinic is one of six finalists in the Romance Writers of America's Golden Medallion competition for her Harlequin Intrigue book, 'Call After Midnight,' written under the pseudonym Tess Gerritsen. . . ." (From Dave Donnelly's Hawaii, March 30, 1988)

Albert Chun-Hoon, president of Orthopedics Associates of Hawaii, Inc., past chairman of the board of HMSA and board member of First Interstate, was appointed to the board of First Interstate of Hawaii Inc., parent company of First Interstate of Hawaii. . . .

The West Hawaii Medical Society elected Scott Mandel president, Mike Nichols president-elect and Brad Kimura secretary-treasurer. Its Board of Governors includes Morton Berk, Clarence Hodges, Alex Silver, Blaise LeeLoy, Ken Grant and Ed Gramlich. . . .

The Hawaii Ophthalmological Society elected Calvin Miura president, George Plechaty vice president, John Drouihet treasurer, Anthony Martyak secretary and Malcolm Ing member-at-large . . .

The Hawaii Plastic Surgery Society elected Maxwell Cooper president, Bennett Lau vice president, Katsuji Kubo secretary-treasurer and Clyde Ishii Jr. as board member . . .

Sports Round-up

Stephen Hirasuna was chairman of the first KMP Golf Tournament staged at Leilehua GC on Jan. 28 and including 32 eager participants . . . When the dust had finally settled, the team of Don Maruyama-Garth Morimoto had placed first; the team of Denny Nakayama and Bill Morioka had come in second and the James Tajima and Tom Sakuda team was in at third . . . Nearest to the pin prizes were won by Gilbert Yamamoto, Don Maruyama and David Sakuda . . .

The 1987 HMA Golf Tournament was held in October at the Wailua Golf Course on Kauai. Bill Dang shot low net with a 84-15 for a net 69 and automatically became the 1988 HMA Golf Committee chairman . . . Low gross winner was Richard Gooddale with gross 80 . . . Second low net was Coolidge Wakai . . . Ray Maruyama won the George Mills Trophy for pharmaceutical reps. with a net 73 . . . Edith Wakai won the woman's flight with a net 80 . . .

The Searle Tennis Tournament took place Feb. 15 (President's Day) at Moanalua Courts with 21 participants . . . The tournament was restricted to internists and FPs (i.e., physicians using Calan SR for hypertension) . . . In A Division, Jeff Nakamura had a comfortable lead but left before his last match. Ed Yee and Wes Hashimoto shared first place while second place went to Thomas Au, P. Limpivasti and Norberto Baysa . . . B Division first place was shared by Raj Mehta and Vic Dizon . . . In second place were George Suzuki and Ben Leung.

The 1987 HCMS Tournament was held Nov. 5 at the Navy-Marine Golf Course and won by Tad Iwanuma with a gross 77, net 66 . . . Guest flight winner was Dana Ichinotsubo with gross 85, net 62 . . .

The 19th Annual Accupath Golf Tournament took place March 24 at the Hawaii Kai Golf Course . . . The overall high net winner was spunky Cora Manayan while men's high net winner was Jim Navin (for shame!) . . . Lowest net was won jointly by George Shimamura (whose handicap needs investigating) and John Cleveland with net 60s . . . Net 63: Neil Shibuya; Net 65: Henry Fong; Net 66: J.N. Park; Net 68: Ed Kagihara and E. Yim; Net 69; Mel Izumi, Richard Mitsunaga, Francis Soon, H. Yokoyama; Net 70: Francis Oda, Clifford Chang, Nobu

Nakasone, Roy Niimi, Fred Pappacco, Gordon Ontai; Net 71: Roy Iritani, Paul Lim . . . Clustered at net 72: Francis Au, Fred Lam, Herbert Nam, N.P. Soo, K.S. Tom, Robert Oishi . . . Other low/net winners were Robert Kim, Ernesto Orinion, Al Young, Ed Emura, Dennis Murakami, Don Maruyama, Ross Hagino . . . Closest to the Pins: Ernesto Orinion; Jose Madamba . . . And a hole-in-one by Robert Nam (Herb Nam's son). . . .

The Kanreki. . .

Oriental tradition says a man reaching his 60th birthday completes one life cycle and starts on his second . . . Hence he is to be outfitted in a red hat and red vest symbolic of a child's outfit . . . Emcee Carl Kaizawa had planned Mike Okihiro's kanreki roast well . . .

First came Mike's younger sister, Grace: "You know what they say about old golfers never dying, but keep losing their balls," she said, placing a lei of golf balls around Mike's neck. . . "When George (Mike's younger brother) got married, he had three kids in rapid succession . . . Mike got him a book on birth control, which George tucked away on a book shelf and promptly had two more . . . When Mike got married and had three successive kids, George found that manual and returned it to Mike who still had two more . . ." etc., etc. . . .

Richard Kuwata was the next roaster: "I'm here because Mike gave me a deal I couldn't refuse . . . Instead of paying the usual price for drug samples, I would get 5% off . . . 20 years ago I had a stroke involving my left side . . . Mike just looked at my left eyelid and said, 'Your left eyelid will droop.' 'Is that it? I asked . . . 'Yep!' 'What about my brain?' I asked anxiously . . . 'What brain? he said . . . Yet, I hung on for I felt Mike's abnormal personality can't get any worse . . . Wrong! My family and I went clamming, spending a whole day digging . . . We took those precious clams to Mike's house . . . Mike demanded, 'You clean them!' And don't bother taking him fresh fish unless you clean them first . . . They say, 'No one is truly rotten to the core . . .' But Mike is . . . Mike is a 5 handicapper and I am a 12 . . . So I asked him how many strokes he is giving me? 'B.S.! Go practice more,' He says. . . And it's only for 25 cents Nassau . . . No wonder Evelyn is the only one who would play with him . . . Poor Evelyn, she gets scolded for 4-1/4 hours, and in between, she gets the 'stink eye' . . . If Mike gives you a 'stink eye' you get cold chills up your spine . . . Ole Stone Face never smiles . . . If you want him to smile, just shank a wedge shot OB . . .

I once called Mike because I was hurt bad . . . 'Wot?' he says. . . . 'I think my leg is broken . . .' 'Wot?' 'I fell from a ladder. . . .' 'Wot the hell you wanna climb a ladder for?' he scolded . . .

Mike thinks I'm a hypochrondriac . . . I'm having diarrhea . . . Mike tells me it's all in my head . . . Mike won't get me a golf cart when we play . . . We walk and my hemorrhoids pop out . . . There's blood on my pants

(Continued on page 387)

Now, the people who practically invented discount brokerage are practically around the corner.

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2—It is unfair for a specialist, just because he is one, to charge an exorbitant fee for sewing up a simple laceration, when it can be done quite capably in his office by a GP, an FP, a pediatrician, an internist or any PCP or LMD. It is doubly unfair for an emergency-room physician to call in a plastic surgeon to do the job at a high fee, even though the surgeon has no overhead when he does it in the ER or OR, as compared with doing it in his own office. I contend that it is equally unfair for an FP to charge a higher fee for doing the simple repair, when what he does is absolutely no different from what a GP would do, and the latter perhaps can do better.

3—The proposed change in regulations would help us to reverse a local unfair practice on the part of our Hawaii Medical Service Association (HMSA), which impinges adversely on the patient/subscriber's pocketbook. A visit or procedure by a physician who is a "non-participant" is compensated by the insurance carrier at a lesser amount than if the patient goes to a physician who is a "Pars." The patient is "out-of-pocket" more, as his share, therefore, even though the premium the patient-subscriber pays is the same in both instances. The third party penalizes the "non-Pars" in order to encourage his becoming a "Pars," but the patient is the one who suffers the most — out-of-pocket. This also applies to Medicare, except that the government shuts the door in the non-Pars face by disallowing him from collecting the difference from the patient — again an instance of indentured servitude. The patient himself often feels this is unjust; he offers to pay the difference "because the doctor deserves it," he says, but the physician MUST refuse!

These are only some of the many unfair discrepancies that need to be remedied by the proposed new regulations. People are now being encouraged to make their own diagnoses and then seek a specialist of their own undiscriminating choice, with resultant increased cost of health care overall. Why use a cannon to kill a mosquito when the palm of one hand will do the job? The proposed elimination of a differential would reverse this direction.

One must realize that the more complicated the case, the more likely and the more automatically will the case be referred to the physician more expert and higher up the chain of specialization. A relative value schedule should be able to take care of that problem in fees rather easily by procedure codes.

One of the failures of our Hawaii RVS was that, when the government intervened by disallowing surveys for revisions, the various specialties ascribed CFs according to their own whims, aided and abetted by our major medical insurance carrier, HMSA, that reveled in the "divide and conquer" tactic by ascribing fee profiles to individual physicians, melded with profiles according to specialties and locale. This tactic permitted HMSA — and state Medicaid — to thumb-screw physicians down to a minimum-fee level despite their rapidly increasing cost of doing business. Consequently, many physicians have been unable to afford to see "welfare" patients, or do see them for free.

I urge the DHHS and its HCFA to weigh carefully the evidence it hopes to garner from the grass roots of American medicine.

HEMOGLOBIN H DISEASE *(Continued from page 374)*

Three patients with Hemoglobin H disease have died. Autopsy in two cases revealed moderate to severe hemosiderosis in various organs including the heart, liver, spleen, pancreas and kidneys (cases 1,9). In these cases, the iron overload may have contributed to their deaths. The third death appears to have been nonhematologic related (case 40). None of the three patients who died was given blood transfusions.

REFERENCES

1. Rigas DA, Koler RD and Osgood EE: New hemoglobin possessing a higher electrophoretic mobility than normal adult hemoglobin, *Science* 121:372, 1955.
2. Gouttas A, Fessas PH, Tsevrenis H and Xefteri ME: Descr. d'nue nouv. variete d'anemie hem. congen. Sang. 26:911, 1955.
3. Minnich V and Na-Nakorn S: Hereditary "Inclusion Body" Disease, Proceed. 6th Congress International Society Hematology, Boston, Mass., p. 441, 1956.
4. Jim RTS: Hemoglobin H Disease, *Arch Int Med* 102:400, 1958.
5. Jim RTS: Personal observations.
6. Encyclopedia Britannica.
7. Curtain CC, Kidson C, Gajdusek DC and Gorman JC: Distribution Pattern, Population Genetics and Anthropological Significance of Thalassemia and Abnormal Hemoglobins in Melanesia, *Am J Physical Anthropology* 20:475, 1962.
8. Jim RTS: Hemoglobin H Disease in Hawaii, Act. Haemat. 27:274, 1962.
9. Jim RTS: Red Blood Count and Hemoglobin Level In Healthy Student Nurses of Oriental Extraction in Hawaii, *Hawaii Med J* 40:329, 1981.
10. Bart's hemoglobin confirmed by Rose G. Schneider, PhD Dept. of Pediatrics, University of Texas, Medical Branch, Galveston, Texas.
11. Jim RTS: Glucose-6-Phosphate Dehydrogenase Deficiency Associated with Hemoglobin H Disease, *Hawaii Med J* 25:112, 1965.
12. Nakayama R, Yamada D, Steinmiller V, Hsia YE and Hale RW: Obstetrics and Alpha-hydrops. Conference on Thalassemias in Asian-Americans. Irvine, CA, March, 1984 (abstract).
13. Performed by Rosalie M. Baine, PhD Chief, Hemoglobin Synthesis Laboratory, Hematology Division, Dept. of Health, Education and Welfare, Public Health Service, Center For Disease Control, Atlanta, Georgia, 1978.
14. Through kind arrangements by Y. Edward Hsia MD, Professor of Genetics and Pediatrics, Director, Medical Genetics Service, University of Hawaii at Manoa, Shriners Hospital, Honolulu, Hawaii, a DNA analysis was performed by A.E. Felice MD, PhD, Dept. of Cell and Molecular Biology and Pediatrics, Medical College of Georgia, Augusta, Georgia, and T.H.J. Huisman MD (Sept. 1984).
15. Kindly performed by Y. Edward Hsia, MD.
16. Jim RTS: Red Blood Count Hemoglobin, & Red Cells Indices in Healthy Adult Orientals in Hawaii, *Hawaii Med J* 46:158, 1987.

NEWS & NOTES

(Continued from page 385)

. . . but it doesn't bother him . . . Luckily, Dick Omura helped me out . . . Whatever you do, don't get sick on Thursday and Saturday afternoons and all day Sundays . . . You can only get sick between 9 and 10:30 a.m. and 2:30 and 3:30 p.m. Monday, Tuesday and Wednesday . . . And don't ever get sick when there's a baseball game on . . . You'll die before he'll see you . . .

While at Michigan, George Ariyoshi told Mike what a good voice he had . . . Mike would practice the only song he knew, 'Jingle Bells' . . . As early as July and August, we all had to sing Jingle Bells with Mike . . .

Tom Kobara was the last roaster . . . "It's kinda hard to roast Mike because he's so browned already."

Re: Mike's famous bedside manner: "He told this young girl, 'You have such beautiful eyes.' She blushed . . . 'Too bad they don't match,' he said . . .

"A patient came limping in with a painful hip . . . Mike measured the legs and found one shorter and so informed the patient. . . 'What do I do about it?' 'Well, if I had one leg short, I would limp too,' Mike said.

Throughout the telling of those hilarious half-truths, and the audience's guffaws Mike grinned happily like a Cheshire cat . . . With such friends, who needs enemies?



Over the Editor's Desk

STEPHEN R.P.K. BRADY, MD

SPECIAL PUBLICATION TO ADDRESS IMPAIRED PRACTITIONERS—A special April issue of the *Quality Review Bulletin (QRB)* explored solutions to the growing problem of impaired physicians, nurses, pharmacists, and mental health professionals. *QRB* is the preferred monthly journal of quality assurance, published by the Joint Commission on Accreditation of Healthcare Organizations. The April issue featured practical expertise of prominent authorities on dealing with impairment, and offers practitioners, managers, and quality assurance professionals an inside view into intervention models, treatment programs, follow-up care methods, and risk management issues.

"Practitioner impairment presents a true threat to the health professions and

(Continued on page 389)

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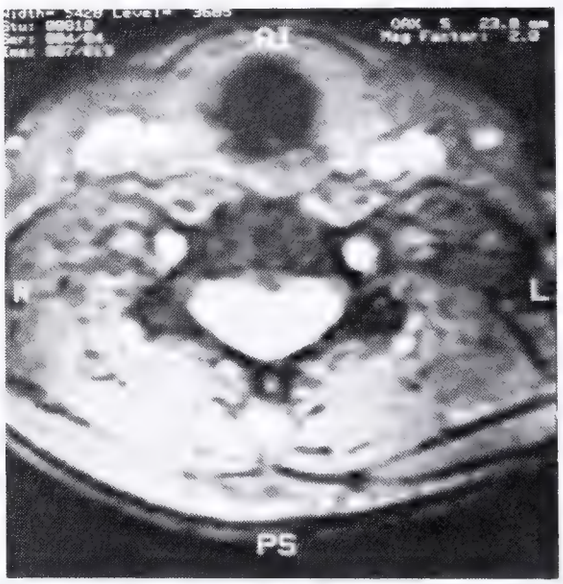
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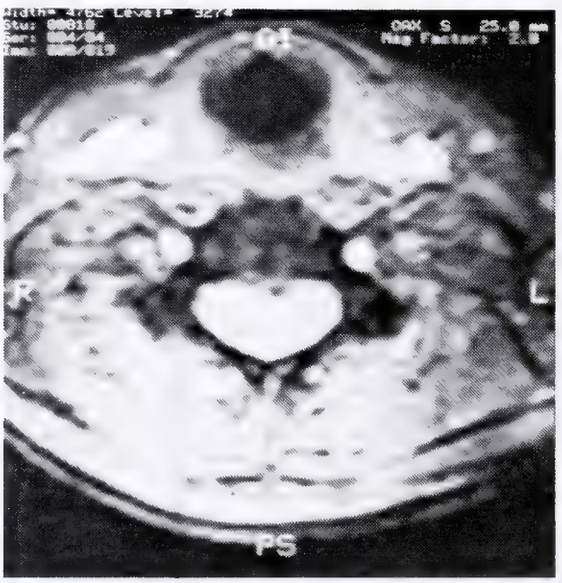
MRI CASE OF THE MONTH

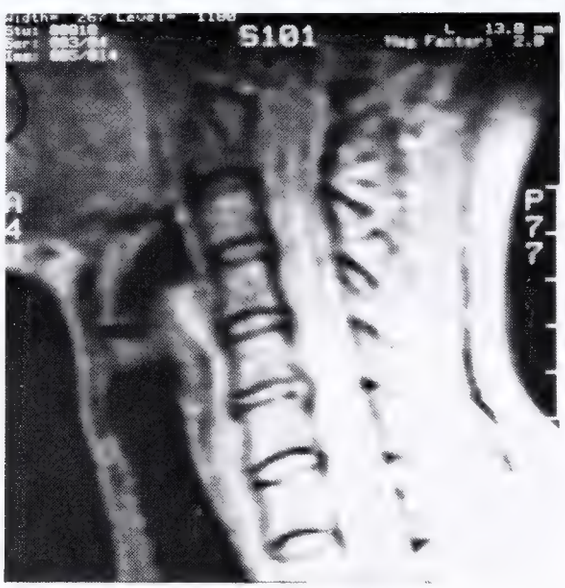
CERVICAL DISC DISEASE

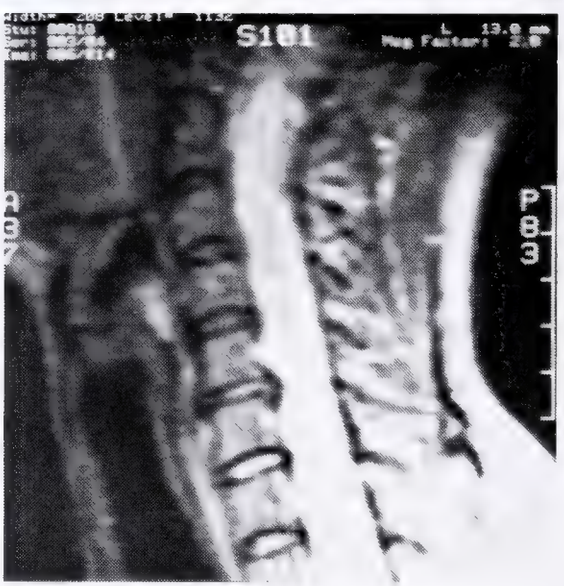
Scan Area: MRI of the cervical spine

Clinical History: Forty-four year old female with disc disease due to auto accident.









These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: The films above in sagittal and axial planes reveal narrowing of the C5-6 intervertebral disc space with central herniation of the nucleus pulposus. There is slight acquired narrowing of the cervical canal. However, the cervical cord has not been displaced.

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OBSERVATION *(Continued from page 371)*

an obstetrician? Can an anethesiologist not observe a surgeon, especially if the former has perhaps seen more instances of a particular operation than any one surgeon? Cannot much of the observation be done by nurses and other hospital staff? The hospital can protect such observers from liability, by making them a regular member of a quality assurance program, and the Health Care Quality Improvement Act of 1986 will confer even more protection for observers and peer reviewers.

If observation is being applied to candidates for staff membership, or to anyone else, unfairly or in a manner likely to hinder their business, this must be corrected immediately. The current competitive environment is likely to make physicians more aware than ever before of potential pitfalls under antitrust legislation, and therefore more ready to seek remedies against such. The medical staff and the hospital administration need to pay heed to this aspect of the matter, for penalties under antitrust laws can include triple damages.

Summary

Many questions about observation have been raised, but few answered. Even if I could give answers satisfactory to all, it would be arrogant on my part to do so. I do not consider it an arrogance to raise the questions, however. Any moves to increase the quality of care can only reflect well on the performance and integrity of our profession. High-quality care is not only good for our patients, satisfactory for our professional honor, but it also makes good sense economically.

Finally, it should be obvious to all of us that there is a price to be paid for obtaining reform of the tort laws. We must demonstrate clearly to the public that we can police ourselves effectively. Current methods of observation do not seem good enough to meet this criterion. As currently conceived and practiced, observation should be abandoned. Perhaps it can be reborn as a newly sharpened tool to serve our goals of quality control. The whole subject needs rethinking.

OVER THE EDITOR'S DESK *(Continued from page 387)*

to the well-being of patients in this country," said William Jessee, MD, Joint Commission vice president for education. "This special-focus *QRB* heightens health-care providers' awareness of these problems and gives helpful information to the many impaired practitioner programs that now assist professionals suffering from substance abuse and mental illness."

RECORD NUMBER OF HOSPITAL CLOSINGS—Seventy-nine U.S. community hospitals closed last year, the highest number of hospital closings ever recorded. Hospitals in 30 states closed their doors, evenly split between urban and rural locations.

Carol McCarthy, president of the American Hospital Association, said the unstable economic environment with which the nation's hospitals must cope contributed to the closings.

"In the past year, nearly seven in 10 rural hospitals in this country lost money caring for patients," she noted, "and 50 percent of urban hospitals operated in the red." McCarthy observed that in addition to losing access to critical hospital care, the community also loses a significant employer when a hospital closes.

Hospitals that close generally have experienced several consecutive years of near break-even or deficit patient care operations. These losses are reflected in a hospital's patient operating margin, which is the difference between revenue and expenses.

McCarthy cited inadequate Medicare payments as a likely contributing factor in hospital closings. Medicare patients account for nearly 40 percent of hospital revenue.

"Inadequate Medicare payments to hospitals is a serious problem," McCarthy said. "Hospitals saw the price of goods and services they purchase rise 32 percent between 1984 and 1988 while Medicare raised the prices it pays hospitals to care for beneficiaries only 11 percent."

Of the 79 community hospitals that closed in 1987, 39 were located in urban areas, 40 in rural areas. Some 35 were for-profit hospitals, 30 were not-for-profit facilities, and 14 were government-owned and operated. Hospitals that closed most frequently operated between 25 and 99 beds.

In addition to the 79 community hospitals that closed, 17 non-community specialty facilities in 13 states closed in 1987. These hospitals generally provided care of a rehabilitative or long-term nature.

The AHA, a not-for-profit organization, serves as a national advocate for hospitals and the patients they serve, provides education and information for its members, and informs the public about hospitals and health-care issues.

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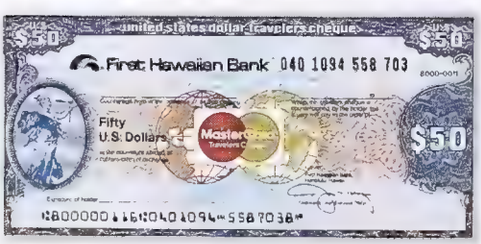
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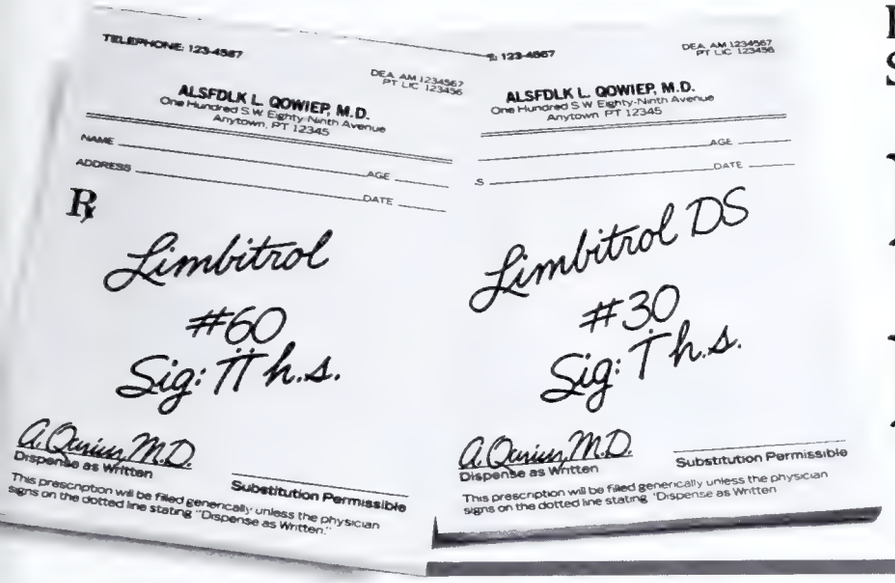
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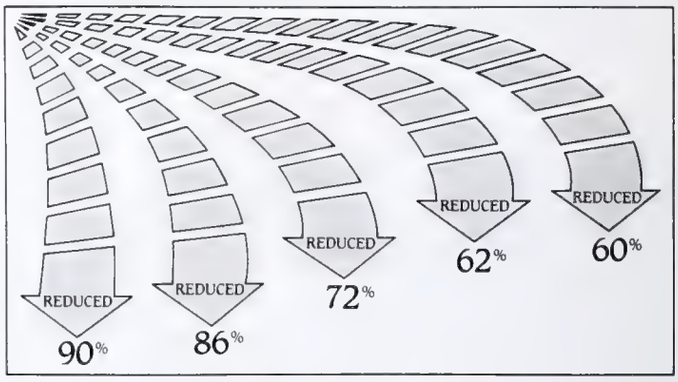
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The war on drugs: Wrong target, wrong approach

Richard Goldstein, writing in the weekly *In These Times,* the issue of October 8-14, 1986, interviewed Andrew Weil, MD, researcher and lecturer at the University of Arizona College of Medicine, on the war on drugs.

Here it is 1988, but the "war on drugs" is continuing and the pros and cons of its effectiveness are still a national attraction and cause for debate. We find Dr. Weil's insight intriguing and worth bringing to the attention of our readers. **Incidentally, Andrew Weil will be a speaker at the June 1989 Symposium at Poipu on Kauai, sponsored by the Kauai Foundation for Continuing Education, with David Elpern, MD, as project director. The five-day symposium will have as its theme "The Power of the Art (of Medicine): Non-technical Aspects of Healing."**

Goldstein mentions that Weil, in 1983, published a book together with Winifred Rosen titled *Chocolate to Morphine: Understanding Mind-Active Drugs,* in which Weil "teaches adolescents who want to use drugs how to do so with the least damage to self and society" — a highly controversial view (and particularly unacceptable in our 1988 climate!).

Weil is quoted as saying, "there probably were as many psychoactive drugs in use 100 years ago . . . but there was no crime associated with drugs. . . . The policies to deal with kids using crack today through criminal law . . . has made drugs attractive. . . . Wars on drugs never work. . . . The end result is to stimulate interest and curiosity. . . . It encourages drug-taking to act out anger and resentment against authority. . . . Our society presents information in a hypocritical manner . . . indicating no intention to include alcohol and tobacco. . . . The government continues to subsidize tobacco addiction, and cigarettes are the worst form of drug abuse in this culture, the greatest public health problem that we have, the most flagrant example of drug pushing . . . onto teenagers who are lured by advertising into thinking it's cool to smoke."

Addressing alcohol more specifically, Weil comments that the violence engendered by crack is totally insignificant as compared to the violence committed under the influence of alcohol. "It is more dangerous than crack . . . no illegal drug comes near alcohol in dangerousness," he said.

When asked about the pharmacology of crack, Weil pointed out that the native way of chewing a coca leaf — "letting a small amount of cocaine diffuse slowly into the blood stream," is vastly different from smoking cocaine "and having it rapidly rise in concentration and enter into the brain . . . that's the most extreme way to experience its pharmacologic effects; that's a stupid way to take it. But our policies have made coca leaves disappear from the market . . . because nobody wants to smuggle such bulk. . . . We have created a situation in which it is *profitable* (emphasis ours/Ed) to smuggle in this isolated, refined drug."

Nevertheless, Weil goes on to deny that he's in favor of going back to a more open environment, "unless it goes hand in hand with real drug education." He would adopt an alternative approach in educating young people, by teaching grade-school students first off about addiction per se: "It's not just a drug problem; people get addicted to sex, food, athletics. . . . There are two basic strategies: One is to teach people to satisfy their needs without using drugs at all . . . drugs take you where you want to go with no work."

Another strategy is to go after the root of the problem, according to Weil, the desire to alter consciousness, and he has written extensively on non-drug methods of doing just that (since this 1986 article, Andrew Weil has come out with *Health and Healing,* which will probably be the foundation for his talk at Poipu in 1989).

It seems to us that Weil's philosophy of education is grounded on trying to put across to reasoning human beings (the beginnings of "reasoning" are manifest before a child is 5 years old!) to beware of addiction to anything; addiction means that the drug, or habit, takes charge, and the person no longer can take command of his own life.

In order to avoid the clutches of an addiction, according to Weil, he would advise experimenters — and all youngsters are "experimenters" who do not believe that the experiences of their elders are credible — in the case of cigarettes, e.g., to chew tobacco "and see how you like it, what its effects are . . . to smoke a cigarette is to invite addiction quickly."

His most provocative statement is: "If drugs were legalized, there would be no drug-related crime . . . because most of the crime associated with drugs has to do with their enormously inflated price, which is a direct consequence of their illegalization, so that people have to get the money to afford them, which often involves committing crimes."

How would our readers respond?

J.I. Frederick Reppun MD
Editor

(Continued)

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FELLOWSHIPS National Institute of Health Fellow; Cancer Research Institute, University of California, San Francisco.

OUTSTANDING ACHIEVEMENTS Freshman Medical Student Research Award; Class President – 2nd year medical school; Student Body President – senior year medical school; Special Award by National Institute of Health to attend and present paper at International Congress of Otolaryngology in Tokyo, Japan; Chairman, Department of Otolaryngology, San Francisco General Hospital 1970-76; Chief of Medical Staff, Franklin Hospital 1982-84.

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Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

Axid® (nizatidine, Lilly)

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Indianapolis, Indiana
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NZ-2903-B-849356

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First and second childhoods

Kopelman et al, in the Special Article of the *New England Journal of Medicine*,[1] report on a survey questionnaire sent to 1,007 members of the Perinatal Pediatrics Section of the AAP; 49% responded. The question was to determine "what their views were on the federal Baby Doe regulations and on whether the regulations had affected their practices."

What should make us physicians think seriously about the trends in medical care as a direct consequence of modern technology is the conclusion: ". . . maximal life-prolonging treatment was not in the best interests of the infants described but the Baby Doe regulations *required* such treatment." (Emphasis ours/Ed).

Does not the same apply to the adult's "second childhood"?

The Oath of Hippocrates enjoins us: **"I shall use that regimen which, according to my ability and judgment, shall be for the welfare of the sick, and I will refrain from that which shall be baneful and injurious."**

Except on the basis of personal, moral, ethical and religious convictions, a physician is *not* obligated to preserve life at all costs, especially at the cost of living like a vegetable, bereft of all the "qualities" of life.

However, the law does sometimes intervene — the more laws enacted, the more they intervene — as in the case of Baby Doe for example.

As our elderly venture into old age with greater certainty of longevity these days, we physicians are faced with an increasing incidence of the dilemma occasioned by a sudden medical catastrophe: A sudden massive stroke or heart attack that strikes these older victims. The dilemma is most often shared by the family and the attending physician(s). A Living Will, in writing, prepared well in advance by the older person, can help, although it is not essential if the relatives and the physicians are as one in their attitude and thinking.

Fifty years ago the dilemma did not exist; the patient lived or died without much medical intervention that was effective. Nowadays, the person gets put immediately onto a conveyor belt and is "kept alive" perforce and, one might say, without "human" manipulation as the sophisticated technology and the artificial brains of computers take over. The longer this goes on, the greater the dilemma becomes and the more difficult it becomes for human beings to intervene one way or the other. To wait "till nature takes its course" may take forever.

Medicine and its professional devotees need a lot of help from our society, from government and from lawmakers, to develop an ethic that will allow us to decide much earlier whether to place the victim on that conveyor belt.

Perhaps we physicians should take a fresh look at Hippocrates' wise counsel: To do what's best for the patient's "welfare," i.e., the quality of life, rather than strictly to preserve life.

An oldster, like a youngster, all too often cannot decide for itself.

J.I. Frederick Reppun, MD
Editor

[1]*NEJM* Vol. 318 No. 11: 677-683.

(Continued)

YOCON®
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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Death from injuries

In this issue, we have an article by Georgeda Buchbinder, MD, PhD, of the School of Public Health at the University of Hawaii.

Dr. Buchbinder's thesis is that not enough attention is being given by the medical profession and the lay public to the epidemiology of the endemic condition that takes as many lives in America as did the war in Vietnam and the current epidemic of AIDS, namely death from injuries.

Some of her points are well taken. On the other hand, her assumptions can often be disputed; at best, her reasoning is provocative. We detect an undercurrent of not understanding the role of the treating physician.

The physician has a traditional role of caring for the ill or injured patient who comes to him or her for succor as a specialist in the ills of the human body and mind.

Although this concern by the physician broadens to encompass the ills of the immediate family, the larger 'ohana, and even the community and the world in which his patient lives, because these milieux have an impact on his patient's health and welfare, there are many other professionals who are better trained to deal with sanitation, housing, economics, wars and other threats to life and limb. The physician often calls on such persons and agencies for help in keeping his patient "healthy."

We think Buchbinder's outlook needs to be addressed by our profession. In this day and age of emphasis on prevention, we physicians cannot hide behind the Hippocratic oath and remain aloof from society's growing problems.

J.I. Frederick Reppun, MD
Editor



Hawaii Medical Library and Charles S. Judd Jr.

To the Editor:

I would like to express my deep appreciation to you for the wonderful special issue of the HAWAII MEDICAL JOURNAL, which celebrated the Hawaii Medical Library's 75th Anniversary and the tribute to Charles S. Judd Jr. The issue is a beautiful testimony to Dr. Judd who touched the lives and was loved by so many people. Dr. Norman Goldstein's vision to organize this special issue is another example of his dedication to the Library and concern for others. The Library has been fortunate to have many such friends over the years to nurture and support the Library for the benefit of others.

We are grateful to you, the HAWAII MEDICAL JOURNAL, and Dr. Norman Goldstein for the wonderful special issue published on our behalf. Mahalo.

Sincerely,
John A. Breinich
Director, Hawaii Medical Library

To the Editor:

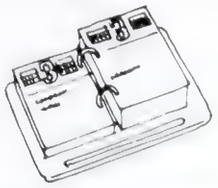
Thanks very much for the HAWAII MEDICAL JOURNAL (issue) on Charlie. Splendid tribute to a guy who (1) had a great heart, (2) had great professional capabilities and hands, and (3) had the gift of rapport with his patients (friends). As you well know, the latter is invaluable . . . at least the layman thinks so!

Aloha,
Walter F. Judd

To the Editor:

Your memorial issue of the HMJ celebrating Charlie Judd's career and his *Menschlichkeit* was a smashing success and a brilliant accomplishment, and it certainly entitles *you*, Norman, to the title of "Mentsh" as well! Bravo! I enjoyed every article, and regretted only that the reference to Harold Civin's article was not caught and completed. It was a great issue! Congratulations!

L'chayim!
Harry L. Arnold Jr., MD
San Francisco



Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS — CATEGORY 1

Accredited programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Asterisked programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS
ONGOING

American Cancer Society, Hawaii Pacific Division Inc.

1. Melanoma Skin Tumor Conference, first Friday, 12:30-1:30 p.m., Queen's University Tower, Room 504.

John A. Burns School of Medicine

1. Department of Medicine
   - *A. Case Conferences, second and fourth Tuesdays, 12:30-2 p.m., Queen's University Tower, Room 618.
   - *B. Grand Rounds, first and third Tuesdays, 12:30-2 p.m., Queen's University Tower, Room 618.
   - C. Endocrinology Grand Rounds, first Tuesday, 5:30-6:30 p.m., Queen's University Tower, Room 506.
   - D. UH-Queen's Conference, every Friday, 8-9 a.m., Queen's Medical Center, Mabel Smyth Auditorium.
   - E. Cardiology Grand Rounds, third Tuesday, 6:30-7:30 p.m., Queen's University Tower, Room 508.
   - F. Infectious Disease Grand Rounds, first and third Thursdays, 5 - 6 p.m., Queen's Nalani I Conference Room.
   - G. Dermatology Grand Rounds, second Wednesday, 7:30-9:30 a.m., Queen's Medical Center, Queen Emma Clinic.
   - H. Pulmonary Grand Rounds, fourth Monday, 12:30-1:30 p.m., Queen's Medical Center, Kamehameha Lounge.
   - I. Nuclear Medicine Grand Rounds, third Wednesday, 5-6:30 p.m., Straub Clinic & Hospital, Doctors' Dining Room.
   - J. Medical-Surgical GI Grand Rounds, third Friday, 12:45-1:45 p.m., Kuakini Hospital, PB4 Classroom.
   - K. Rehabilitation Hospital of the Pacific Grand Rounds, first and third Thursdays, 7:30 - 8:30 a.m., Rehabilitation Conference Room, first floor.
   - L. Neurology Grand Rounds, second Thursday, 12:30-1:30 p.m., Queen's Medical Center, Kam Auditorium.
2. Department of Obstetrics and Gynecology
   - *A. Grand Rounds, Wednesdays, 7:30-8:30 a.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - B. Tuesday Conference, Tuesdays, 1-2 p.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - C. UH Conference, Fridays, 2:30-3:30 p.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
3. Division of Orthopedics
   - A. Fracture Conference, Mondays, 5-6 p.m., Queen's University Tower, Room 618.
   - B. Shriners' Tuesday Conference, Tuesdays, 7:15-8:15 a.m., Shriners Children's Hospital, Auditorium.
4. Department of Pediatrics
   - A. Grand Rounds, Thursdays, 8-9 a.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - B. Monday Noon Conference, 12:45-1:45 p.m., Kapiolani Medical Center for Women and Children, second-floor auditorium.
   - C. Pediatric Infectious Disease Conference, Thursdays, 12:30-1:30 p.m., Kapiolani Medical Center for Women and Children, third-floor conference room.
   - D. Perinatal Grand Rounds, Fridays, 8:15-9:15 a.m., Kapiolani Medical Center for Women and Children, Conference Room B.
5. Department of Psychiatry
   - A. Grand Rounds, Fridays, 8-9:30 a.m., Queen's University Tower, Room 618.
   - B. Scientific Forum, Mondays, 12:30-2 p.m., Kapiolani Medical Center for Women and Children, Conference Room 626.
   - C. Hawaii State Hospital Psychiatry Education Conference, third Wednesday, 10:30 a.m.-noon, Hawaii State Hospital, Goddard Conference Room.
6. Department of Surgery
   - A. Grand Rounds, first, second, and third Saturdays, 7:30-9 a.m., rotating hospitals.
   - B. Statistical M&M, last Saturday, 7:30-9 a.m., rotating hospitals.
   - C. Journal Club, first and third Tuesdays, 6-8 p.m., Queen's University Tower, Rom 620.
   - D. Medical-Surgical GI Grand Rounds, third Friday, 12:45-1:45 p.m., Kuakini Medical Center, PB4 Classroom.
   - E. Pediatric Surgical Grand Rounds, first Friday, 12:45-1:45 p.m., Kapiolani Medical Center for Women and Children, Conference Room B.
   - F. Basic Science Lecture, Wednesdays, 7:15-8:15 a.m., Queen's University Tower, Room 618.
7. Department of Pathology
   - A. Neuropathology Conference, first Saturday, 8-9 a.m., St. Francis Hospital, Sullivan IV Classroom.

For further information on any of these programs, please call the Continuing Medical Education office at 948-6949.

Castle Medical Center

1. CME Programs, first and third Tuesdays, 12:30-1:30 p.m., Castle Medical Center's auditorium.
2. Windward Oncology Programs, second and fourth Tuesdays, 12:30-1:30 p.m., Castle Medical Center's auditorium.

For further information, call Staff Development at 263-5186.

Chart Rehabilitation of Hawaii, Inc.

1. CME Programs, Thursdays, 8-9 a.m. Topics and visiting professorships to be announced.

For further information, or to be placed on the mailing list, contact Comprehensive Health and Rehabilitation Training (CHART) at 523-1674.

(Continued)

CONTINUING MEDICAL EDUCATION
(Continued)

G.N. Wilcox Memorial Hospital

1. General Medical Staff Meeting, Quarterly in January, April, July, and October, 7:30 p.m., Hospital Conference Room.
2. Clinical Review, Mondays (occasional Friday), noon-2 p.m., Hospital Conference Room.
3. Journal Club, last Monday, bimonthly (January, March, etc.), Hospital Conference Room.

For further information, call Medical Staff Services, 245-1173.

Hawaii Medical Association

1. HMA Maternal and Perinatal Mortality Study Committee, Monday, 5:30 p.m., on an on-call basis. 1360 S. Beretania St., 2nd Fl., Cat. 1 on hr. for hr. basis. (Call 536-7702 to confirm meeting schedule.)

Hawaii Ophthalmological Society

1. Monthly Dinner Meeting, third Thursday of each month (except July, August, and December), 6:30-9:30 p.m., The Pacific Club.

Hawaii Thoracic Society

1. To be announced — Visiting Professorship Program Statewide.
2. Sinclair Chest Club Quarterly Dinner Meetings, January, April, July, and October. Call Rosemary Respicio, BSN, at 537-5966 for dates and speakers.

Hilo Hospital

1. Radiology Conference, first Friday, 12:30-1:30 p.m., GC-1 Conference Room.
2. Tumor Conference, second Friday, 12:30-1:30 p.m., GC-1 Conference Room.
3. "Great Case" Conference/Clinical Pharmacology, third Friday, 12:30-1:30 p.m., GC-1 Conference Room.
4. Pathology Conference/Morbidity-Mortality Review, fourth Friday, 12:30-1:30 p.m., GC-1 Conference Room.
5. Visiting Professor/Network for Continuing Medical Education Tapes (ETV), Saturdays, 7-8 a.m., GC-1 Conference Room.

For further information, call Administration at 969-4382.

Kaiser Foundation Hospital

1. Obstetrics/Pathology Conference, first Monday, noon-1 p.m., Moanalua fourth-floor conference room.

*2. Medicine Grand Rounds, Tuesdays, 8-9 a.m., Moanalua Auditorium.

3. Tumor Board, Tuesdays, noon-1 p.m., Moanalua Auditorium.
4. Pathology Conference, Fridays, 11 a.m.-12 noon, Moanalua Conference Room A.
5. Surgical Grand Rounds, Fridays, 8-9 a.m., Moanalua Auditorium.

*6. Family Practice Grand Rounds, fourth Thursday, 7:45-9 a.m., Moanalua fourth-floor conference room.

7. Obstetrics/Perinatal Conference, last Tuesday, 8-9 a.m., Moanalua fourth-floor conference room.
8. Network for Continuing Medical Education (NCME) Videotape Program, Monday-Thursday, noon-2 p.m., Moanalua Conference Room C-D.
9. The Clifford J. Straehley, MD Symposium, September 24, 1988, 11:30 a.m.-2:30 p.m., Moanalua Auditorium.

For further information, call CME Office at 834-9496 for topics.

Kona Hospital

1. Monthly CME Meeting, third Friday, 7:30-8:30 a.m., Hospital Conference Room.
2. Grand Rounds/Tumor Board, third Thursday, 7:30-8:30 a.m., Hospital Conference Room.
3. Visiting Professor Programs (For further information, call 322-9311 ext. 29 or 55.)

Kuakini Medical Center

1. Visiting Professor Lectures (ongoing).
2. Guest Lectures (ongoing).
3. Neurology Conference, second Monday, 12:30-1:30 p.m., Resident's Conference Room.
4. Nephrology Conference, third Monday, noon-1 p.m., Resident's Conference Room.
5. Department of Ophthalmology Meeting, first Tuesday, 12:30-1:30 p.m., bimonthly, Private Dining Room.
6. Internal Medicine Study Club, second Tuesday, 6-7 p.m., PB-4 Conference Room.
7. Department of Medicine (M&M), fourth Tuesday, 1-2 p.m., Hale Pulama Mau Auditorium.
8. Endocrinology Conference, first Wednesday, 12:30-1:30 p.m., Resident's Conference Room.
9. G.I. Conference, second Wednesday, 12:30-1:30 p.m., Resident's Conference Room.
10. Infectious Disease Conference, third Wednesday, 12:30-1:30 p.m., Resident's Conference Room.
11. Oncology Conference, Thursdays, 7:30-8:30 a.m., PB-5 Conference Room.
12. Hematology and Oncology Conference, first Thursday, 12:30-1:30 p.m., Resident's Conference Room.
13. Pulmonary Conference, second Thursday, 1-2 p.m., Resident's Conference Room.
14. Rheumatology Conference, third Thursday, 12:30-1:30 p.m., Resident's Conference Room.
15. Cardiology Conference, fourth Thursday, 12:30-1:30 p.m., Resident's Conference Room.
16. Surgical Conference, first Friday, 12:45-1:45 p.m., PB-5 Conference Room, (Note: Also fourth Friday, if there are five Fridays in a month.)
17. Nutrition Conference, second Friday, bimonthly 12:30-1:30 p.m., Private Dining Room.
18. Surgical Trauma Conference, second Friday, 12:45-1:45 p.m., PB-5 Conference Room.
19. Surgical Mortality and Morbidity Conference, last Friday, 12:45-1:45 p.m., PB-5 Conference Room.

Maui Memorial Hospital

1. Department of Medicine, first Thursday, 7-8 a.m., auditorium.
2. Department of Surgery, second Thursday, 7-8 a.m., auditorium.
3. Department of Obstetrics & Gynecology, third Thursday, 7-8 a.m., classroom #2.
4. Department of Pediatrics, fourth Thursday, 7-8 a.m., auditorium.
5. Fifth Thursday Meeting: 7-8 a.m., auditorium.
6. Tumor Board Conference; second Friday and fourth Wednesday, 7-8 a.m., multipurpose room.
7. Anesthesia Conference, second Wednesday, 7-8 a.m., multi-purpose room.

The Queen's Medical Center

1. Anesthesiology Conference, first and second Wednesdays, 7-8 a.m., Doctors' Conference Room.
2. QMC Cardiology Rounds, Wednesdays, 9-10 a.m., Kam Auditorium.
3. Emergency Medicine Conference, third Tuesday, 11:30-12:30 p.m., Harkness Room 139.
4. ENT Conference, first and second Fridays, 7:30-8:30 a.m., Harkness Room 139.
5. QMC-UH Medical Conference, Fridays, 8-9 a.m., Mabel Smyth Auditorium.
6. MICU Lecture, Mondays, Tuesdays, Wednesdays, and Thursdays, 9-10 a.m., Queen Emma Tower, Room 4B.
7. Neuro-Radiology Conference, Mondays, 8-9 a.m., Imaging Services classroom, QET #2.
8. Ob/Gyn Conference, Mondays, 1-2 p.m., Kam Auditorium.

(Continued on page 407)

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CONTINUING MEDICAL EDUCATION

(Continued from page 404)

9. Ophthalmology Conference, fourth Tuesday, 4:45-6 p.m., Doctor's Conference Room.
10. Orthopaedic Conference, Wednesdays, 7-8 a.m., Kam Auditorium.
11. Pathology Conference, Wednesdays, 7-8 a.m., Queen Emma Tower, fourth floor.
12. Pediatrics Conference, fourth Thursday, 12:30-1:30 p.m., Harkness Board Room.
13. Surgical Conference, Tuesdays, 4:30-5:30 p.m., Kam Auditorium.
14. Special Conference: Advance Cardiopulmonary Life Support. For further information, contact Kevin Donnelly, Nursing Education 547-4373.

St. Francis Medical Center

1. *Oncology Conference, Mondays, 7:30-8:30 a.m., Sullivan IV Classroom.
2. *EENT Meeting, first Tuesday, 7:30-8:30 a.m., Sullivan IV Classroom.
3. *Surgery Grand Rounds, first, second, and third Fridays, 7:30-8:30 a.m., Sullivan IV Classroom.
4. *Dept. of Medicine Conferences, Thursdays, 8-9 a.m., Sullivan IV Classroom (for SFH staff members only).
5. *Medico-Legal Seminars, last Thursday of each month, 8-9 a.m., L.Q. Pang Auditorium. (Everyone welcome).
6. Hematology Conference, third Thursday, 12:30-1:30 p.m., Sullivan IV Classroom.
7. *Internal Medicine Review series, Monday, Wednesday, Thursday, Friday, 12:30-1:30 p.m., Sullivan IV Classroom. (Contact the Medical Education Office at 547-6497 for specific dates of lectures.)

Straub Clinic & Hospital

1. Friday noon Conference, Fridays, 12:30-1:30 p.m., Doctors' Dining Room.
2. Patient Care Conference, second Tuesday, 5-6 p.m., Doctors' Dining Room.
3. Cardiac Surgery Conference, fourth Tuesday, 4:30-5:30 p.m., Doctors' Dining Room.
4. Neuropathology Conference, fourth Saturday, 8-9 a.m., Doctors' Dining Room.
5. Surgical Morbidity and Mortality Conference, fourth Thursday, 7-8 a.m., Doctors' Dining Room.
6. Visiting Professor Conference, variable time throughout the month, Doctors' Dining Room.
7. Gastroenterology Journal Club, fourth Tuesday, 5-6:30 p.m., 5th Floor Conference Room.
8. Fluorescein Angiography Conference, third Thursday, 4:30-5:45 p.m., First Insurance Building, Room 950.
9. Fronk Clinic Educational Meeting, variable monthly, 6:30-7:30 p.m., Fronk Clinic.
10. Video Conference, first Thursday, 12:30-1:30 p.m., Doctors' Dining Room.

For further information, call the Office of Professional Activities, 522-3151.

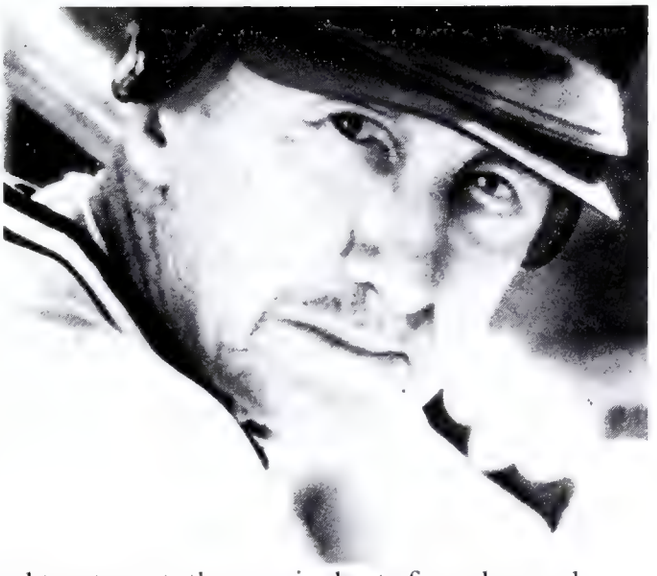
Wahiawa General Hospital

1. CME Program, Tuesdays, 1-2 p.m., SNF Dining Room. For further information, call the Medical Staff Services Office at 621-8411.

Note: All conferences are subject to change. Monthly calendar is available upon request.

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Dr. Calvin C.J. Sia

Our very active HMA member, certainly a "lifter" rather than a "leaner," Cal C.J. Sia, in the footsteps of his illustrious father, Richard H.P., brings to the pages of the JOURNAL an accounting of his efforts to provide every child in Hawaii a "medical home." We feel it is important that readers realize where Cal comes from, hence the following. This comes from the files of the HMA.

Editor

Dr. Calvin C.J. Sia came to Hawaii in 1939 from his native homeland of Peking, China. Today, he is a physician known for leadership, for untiring years of voluntary service to the community, and for his talent "in getting things done," as one colleague put it. Although he is recognized for many accomplishments, he is best known for his advocacy on behalf of children.

Through his efforts, legislation was passed creating the School Health Services Branch of the Department of Health for all public schools; a school immunization law was enacted providing for enforcement and giving Hawaii one of the highest immunization levels in the U.S.; the child abuse reporting act became law; community services for special education were enhanced; and just this year he helped channel a bill mandating insurance coverage for well-baby care, which was signed into law.

Cal initiated the development of the Children's Protective Center, the Hawaii Family Stress Center, the Variety School for Learning Disabilities, Project Healthy Start, Home Visitor Program and Parenting Support Center. He was actively involved with the first and subsequent White House Conferences on Families.

Actively involved in the American Academy of Pediatrics, both in Hawaii and nationally, he currently serves as chairman of the AAP Section Council on Pediatrics and is the AAP Delegate to the American Medical Association. In organized medicine, he has served as committee chairman of numerous committees; he has been Commissioner of Public Health and also HMA President.

Dartmouth College Class of 1950 honored Cal for "Outstanding Contributions to Society." He was HMA's Physician of the Year in 1979. He received the Golden Apple Award from the Western Interstate Commission on Higher Education for services to handicapped children, and most recently was presented with the U.S. Department of Health and Human Services, Administration for Children, Youth, and Families Commissioner's Award for his outstanding contributions to the prevention of child abuse and neglect.

In his 30 years of private pediatric practice and untold hours of service to the community, he has also been devoted to his wife, Katherine, and their three sons. It also has been said that his youthful spirit and energy may be helped along by his standing appointment at the tennis court on Wednesday afternoons, although the score of those matches is unknown.

The medical home comes of age

Calvin C.J. Sia, MD*
Margo I. Peter, MEd**

The "medical home" concept gained attention in 1978 when the Hawaii Medical Association and the Hawaii Chapter of the American Academy of Pediatrics adopted a comprehensive Child Health Plan. The Child Health Plan stressed the importance of an integrated system for child health care that would provide preventive medical care for children early in life. Care, focusing on the child and family, would be provided within the context of a medical home. This medical home provides primary health-care services that are comprehensive in nature, addressing the needs of the whole child.

The essentials of a medical home were outlined in an earlier article, "The Role of the Medical Home in Child Abuse Prevention and Positive Child Development," as (1) geographic and financial accessibility, (2) continuity of care from the prenatal period through early childhood and adolescence, (3) coordination through early identification of needs and linkage of the family to services needed by the child, and (4) community orientation of awareness of child health problems and resources within the community[1].

Child health problems are changing in the community and nation. The morbidity facing children today includes behavioral and developmental concerns as well as illness and disease. Pediatricians are increasingly expected to provide prevention, early detection and management of psychosocial, behavioral and developmental concerns[2,3]*. Thus, prevention and treatment of this new morbidity must be integrated into the pediatric medical home.*

The Hawaii Chapter of the American Academy of Pediatrics established an Early Intervention Committee in 1986 to work jointly with the Hawaii Family Stress Center in establishing a medical home for high-risk and at-risk children. The Federal Bureau of Maternal Child Health supported this effort with a three-year SPRANS (Special Projects of Regional and National Significance) grant. The SPRANS Physician Involvement Project (PIP) was initiated to facilitate primary-care physician participation in preventive health programs for high-risk children age 0-5. PIP presents a unique model for physician involvement in the medical home concept.

As noted above, the morbidity of America's children is changing. Diseases once fatal have been arrested and controlled. Epidemics of cholera, polio and meningitis have been replaced by escalating concerns with prematurity, developmental disability and behavioral problems. This "new morbidity," identified by Robert Haggerty[4], calls for a more developmental perspective in child health care. This call goes out to all child health-care providers, but is especially critical for pediatricians.

Effective prevention and treatment of the new morbidity depends on the awareness and skills of our pediatricians. This emerging reality compels pediatric training to provide comprehensive preparation for the new morbidity. Despite a mandate to change issued in 1978 by the Task Force on Pediatric Education, residency training programs continue to emphasize inpatient neonatal treatment for primary-care pediatricians[5,6]. Training revolves around illness and emergency treatment. Consequently, developmental issues often take a back seat to intensive care. It is important to note that this form of training is not limited to the experience that medical students receive but persists all the way through programs that educate medical students to continuing medical education courses for the practicing physician.

Pediatricians, child advocates by nature as well as profession, are finding themselves in a difficult position. They are increasingly faced with challenges for which they are inadequately prepared[7,8]. Developmental, behavioral and psycho-social problems are emerging as issues in the pediatrician's office as never before. Management of the burgeoning population of children who have special needs raises issues that perplex many practitioners.

The Hawaii Family Stress Center is addressing these issues. Under a 1986 SPRANS grant, we instituted the Physician Involvement Project. PIP is "piggy-backed" onto Project Healthy Start (PHS), a child abuse prevention project, designed to prevent child abuse/neglect while supporting positive development. The unique feature of PIP is its focus on the community's pediatricians. Activities are designed to facilitate pediatricians' awareness of the importance of early identification and treatment, as well as to provide the physician with skills to use on this new morbidity. In addition, PIP works with PHS to facilitate establishing a medical home for each project child.

PIP's overall goals are: (1) To emphasize preventive health care for PHS children, (2) to reduce severity of the new morbidity for these children by means of early identification and treatment, (3) to increase the community's pediatricians' sense of involvement in a "team" approach and (4) to develop a process for accomplishing these goals that can be replicated elsewhere. In the 11 months since PIP's inception, significant strides have been made toward accomplishing these goals.

(Continued)

* Past President, Hawaii Medical Association; American Academy of Pediatrics, Hawaii Chapter; Pediatrician in private practice in Honolulu.

** Physician Involvement Coordinator, Hawaii Family Stress Center, 2919 Kapiolani Blvd., Suite 30, Honolulu, Hawaii 96826.

TABLE 1
Identified Problems and Strategies for Change

Problem	Strategy
(1) Traditional views of medicine are illness-oriented.	Importance of wellness-care stressed through outreach to the home. Health/developmental status of PHS children are monitored by PIP staff. PIP staff facilitates well-baby visits and monitors development.
(2) High-risk families are often difficult to work with.	Transportation for health care visits is provided. Home outreach worker facilitates learning positive habits on the part of PHS families.
(3) Reimbursement for wellness-care is low.	PIP staff and pediatricians lobby for legislation supporting appropriate reimbursement for wellness-care.
(4) Training opportunities concerning the new morbidity are inadequate.	Training through CME series: Child Development and the Modern Pediatrician Monthly small group meetings with pediatricians in the community. Individual case conferences with pediatricians who care for PHS children. An Interagency task force is working to facilitate coordination of services between pediatricians and support services.

A first and critical step toward accomplishing these goals was to develop a clear and accurate definition of the problem(s). In Hawaii, four major problems were identified and targeted for change:

1—Traditional medical models are illness- rather than wellness-oriented.
2—High-risk families are difficult to work with.
3—Reimbursement for wellness-care is low.
4—Training opportunities concerning the new morbidity are inadequate.

Working in consultation with a core group of pediatricians, PIP staff developed strategies that would have an impact on the problems identified (Table 1). Underlying these strategies is the realization that effecting enduring change requires making an impact on beliefs and attitudes as well as on behavior. Activities are designed to provide a rationale for a preventive medicine approach to pediatrics. Once the theoretical foundation for change has been put into place, specific skills and tools to use with the new morbidity need to be introduced.

Two crucial elements contribute to success. The first and most important is involvement by the pediatricians in the community. A core group of pediatricians assist with project design and implementation. Core group members include leaders in the pediatric community, practicing pediatricians who are advocates for the child, and a few pediatricians who are well versed in legislative process.

The second important element is the momentum within the community that supports project objectives. Momentum is generated and sustained through interagency collaboration. Community and cooperation are the watchwords, as we work with other agencies concerned about this new morbidity. A prime example of this is a series of visiting professors, co-sponsored by the John A. Burns School of Medicine, the University of Hawaii School of Public Health and the PIP, who will present the issues of the new morbidity to students and practitioners. PIP's Project Bridge Interagency Task Force is developing communication between early intervention agencies and pediatricians. This joining of forces creates a momentum in the community and institutionalizes the project.

Hawaii's pediatricians are emerging as role models for the rest of the nation. High attendance at the continuing medical education sessions reflects an increasing movement toward concern with development and a preventive medicine approach to pediatrics in Hawaii. There is a growing feeling that the care of the new morbidity is "where it's at." This emerging viewpoint will move us forward toward our ultimate goal: Supporting optimal health and development for the children and families of Hawaii.

REFERENCES

1. Sia CJ and Breakey GF: The role of the medical home in child abuse prevention and positive child development. *Hawaii Med J.* July, 1985; 44:242-243.
2. Council on Long Range Planning and Development in Cooperation with American Academy of Pediatrics: The future of pediatrics, implications of the changing environment of medicine. *JAMA,* 1987; 258:240-245.
3. American Academy of Pediatrics Committee on Psychosocial Aspects of Child and Family Health. Pediatrics and the psychosocial aspects of child and family health. *Pediatrics,* 1982, 79:126-127.
4. Haggerty RJ: The changing role of the pediatrician in child health care. *AJDC,* 1974; 127:545-549.
5. Kempe HC: The future of pediatric education. *A Report by the Task Force on Pediatric Education,* 1978.
6. Weinberger and Oski F: A survey of pediatric residency training programs five years after the task force report. *Pediatrics,* 1984; Oct:523-526.
7. Cleveland WW and Brownlee RC: American board of pediatrics future training of pediatricians: summary report. *Pediatrics,* 1987; 80:451-457.
8. Kapp S: The pediatric residency program of the future; part III. *AJDC,* 1987; 141:1156-1157.

MRI CASE OF THE MONTH

SUBEPENDYMAL GIANT CELL TUMOR

Clinical Information: The patient is a 25-year-old female with known tuberous sclerosis and hydrocephalus.

Figure A

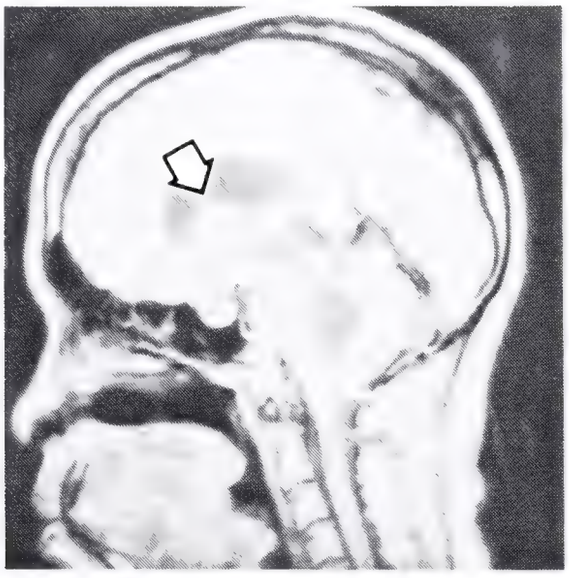
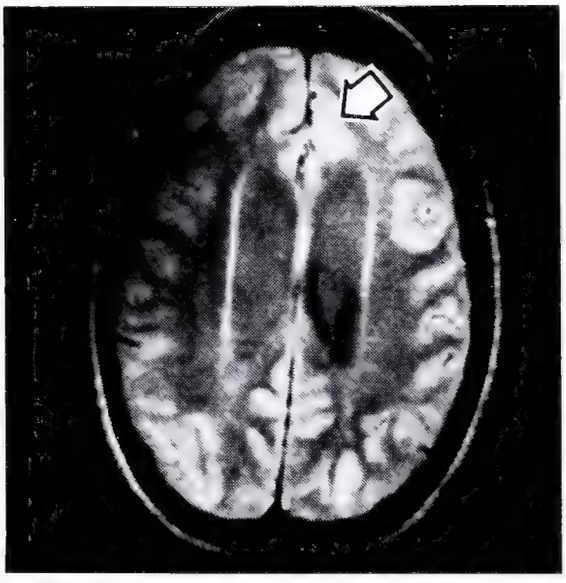


Figure B



Figure C



Radiologic Diagnosis:

Figure A: The sagittal T1-weighted sequence shows a 1-½cm tumor situated at the right foramen of Monro. Note the enlargement of the IVth ventricle as well.

Figure B: Figure B also demonstrates this large tumor at the right foramen of Monro and shows enlarged lateral ventricles.

Figure C: Demonstrates a left frontal cortical tumor which is extremely difficult to identify on CT.

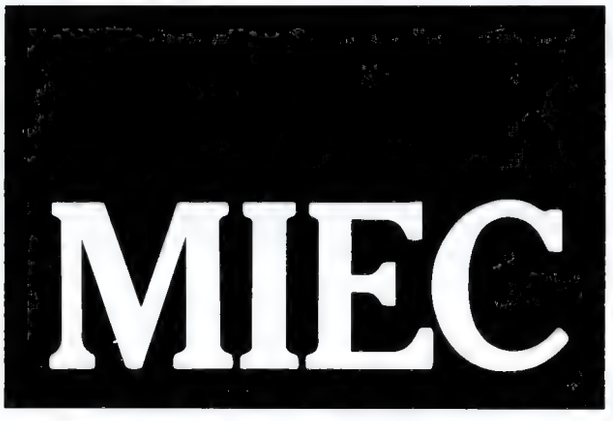
Comment: MRI is exquisitely sensitive in detecting intraventricular and intraparenchymal tumors as well as cortical tumors. The enlargement of the IVth ventricle suggests the patient has a communicating type of hydrocephalus. These findings are consistent with tuberous sclerosis.

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Herpes Simplex culture in a small laboratory

Rex D. Couch, MD
Susan Brinkworth
David J. Elpern, MD

This study assesses the usefulness of culturing for herpes simplex virus (HSV) in 100 consecutive patients. Testing was performed in a small hospital/clinic laboratory. On the basis of clinical and cytologic criteria, the sensitivity and specificity of the test were 93% and 100%, respectively.

Introduction

Patients with herpes simplex infections commonly present themselves to physicians in all clinical specialties. The features of this prevalent viral infection are not always straightforward. Definitive diagnosis has become imperative, since the genital form of this disorder has come to have a serious social stigma[1]. For years, the cytologic Tzanck smear has been the standard diagnostic procedure[2]. However, specimen collection requires some expertise, and the smear can detect positivity for only a few days after the appearance of vesicles[3,4]. Serological tests are of limited diagnostic value for recurrent disease, since antibody titers may be present during both the acute and quiescent phases. For primary infections, one must obtain acute and convalescent serum specimens, a procedure requiring two to three weeks. Direct immunofluorescence and direct immunoperoxidase staining of smears obtained from suspicious lesions are accurate ways to make a rapid diagnosis, but they require specialized equipment and expertise often not available in most small hospital laboratories[5].

Viral culture is the "gold standard" for the diagnosis of herpes simplex infections. Over the past few years, various culture kits have become available. They allow a diagnosis to be made with certainty in one to two days, do not require skill in specimen collection, and remain positive for many days after the Tzanck smear is negative. Also, it is extremely important to provide a timely diagnosis, since specific therapy is available. We report our experience with the herpes simplex cultures from the first 100 patients studied in the laboratory at G.N. Wilcox Memorial Hospital.

From the G.N. Wilcox Memorial Hospital and the Kauai Medical Group (Drs. Couch and Elpern) and the Kauai Medical Group Summer Student Program (Ms. Brinkworth).

Address reprint requests to Rex D. Couch, MD, 3420-B Kuhio Hwy., Lihue, Hawaii 96766.

The Test

Cultures in this series were performed utilizing the Ortho Diagnostics Cultureset Test® . The kits provide a transparent medium, stable under refrigeration for 72 hours, layered cells (vero cell line) as the culture medium, and a rabbit anti-HSV peroxidase-labeled antibody specific for HSV-I and HSV-II (Fig. 1). Although the antibody is not produced by means of monoclonal technology, it appears to be quite specific (see below). Because of the increasingly common crossover of types I and II infections in oral and genital herpes, the test is designed to reflect positivity if either type is present.

Performance of the test in the laboratory, in contrast to obtaining the clinical specimen, is demanding and requires great attention to technique at all steps. Cultures can be stained with labeled antibody at 24 to 48 hours. Sensitivity is increased with 48-hour incubation — 98% — versus 94% at 24 hours[6].

The antibody-staining procedure encompasses both positive and negative controls. A positive culture exhibits characteristic brownish-orange staining from the aminoethyl carbazole dye with which the antibody is conjugated (Fig. 2). Negative cultures show no staining of the uniform pale blue monocellular layer.

TABLE 1
Age Distribution of Patients

Age in Years	Male	Female
0-14	6	3
15-29	4	27
39-44	7	28
45-59	2	2
60-74	1	3
75+	1	1

The Patients

Our first 100 patients presented a much broader and more challenging set of clinical problems than we had anticipated. The ages and genders of the patients studied are shown in Table 1. The physicians by specialty, who requested the tests appear in Table 2.

(Continued)

TABLE 2

Specialty of Attending Physician

Specialty	% of Total
Dermatology	40
Otolaryngology	2
ER Medicine	1
Family Practice	10
Internal Medicine	1
OB/GYN	43
Ophthalmology	2
Pediatrics	1

Most of the patients (87%) had cutaneous or genital lesions that were both clinically important and potentially treatable. Thirteen percent were cervical cultures from women who were pregnant (35 to 40 weeks gestation) and who had a clinical history of genital herpes infection. Since all these cultures were negative, vaginal deliveries could be carried out safely, and were. The advantages in circumventing caesarean section, both in human and economic terms, are obvious.

The prevalence of positive genital cultures was 34%, and 73% of these patients received specific therapy. Of those with positive skin cultures, 63% were treated. In addition to the therapeutic benefits accrued, important differential diagnostic decisions were reached (see illustrative cases) in several instances.

TABLE 3

Results of Culture

	Culture	
	Positive	Negative
Patients: With Disease	39	3
Patients: Without Disease	0	58

Case Reports

Case 1

A 7-year-old boy had a one week history of a bullous and ulcerative lesion on the right index finger. Incision and drainage and therapy with oral cloxacillin had not been effective. He developed a flu-like syndrome with oral temperatures to 102°F. His 2-year-old sister had recently had an oral HSV infection. A single large bulla partially covered by an eschar occupied the paronychial area of the right index finger. An ipsilateral epitrochlear lymph node was enlarged and tender. The Tzanck smear and a bacterial culture were negative. Herpes simplex culture was "4+" at 72 hours.

Comment: Herpetic whitlow is not uncommon[7]. Its clinical appearance is not diagnostic, so a high index of suspicion is necessary[7]. The family history was most helpful. Tzanck smears are frequently negative late in the course of an infection, but viral culture was reliable and confirmed the diagnosis.

Case 2

A para 5 gravida 3, 34-year-old woman was seen by her obstetrician at 30 weeks gestation with "typical" herpes zoster at the right T-10 dermatome. Tzanck smear and HSV culture were obtained. The Tzanck smear was positive, and the herpes culture read "1+ positive." In the face of such an unexpected result, a repeat specimen was collected for ELISA testing. Type 1 herpes simplex virus was confirmed, as opposed to herpes zoster. Herpes simplex virus did not grow in weekly cultures of the cervix, and she delivered vaginally at term without incident.

Comment: This was apparently a case of zosteriform herpes simplex infection[8]. In certain high risk patients with herpes zoster (pregnant or immunocompromised) it may be prudent to obtain viral cultures to confirm the presence of herpes simplex. While varicela-zoster virus poses little threat to the fetus or newborn, herpes simplex may have grave implications.

Case 3

An 18-year-old woman who presented with a morbilliform drug eruption thought to be due to trimethoprim-sulfamethoxazole or to amoxicillin had received the former one week before for "cystitis," and the therapy was changed after she did not improve. On more detailed questioning, she mentioned a "sore" on the buttock present at the time of onset of urinary symptoms. On examination, she had a generalized eruption with erythematous macules and papules. Crusts and vesicles were present on the right buttock. Tzanck smear was equivocal. HSV culture was positive.

Comment: Genital HSV infections may cause urethritis[9]. Bacterial cystitis was never proven and she evidently had a cystitis due to HSV. However, diagnostic cells were not seen in the urine. After seven days, the Tzanck smear was equivocal but the HSV culture was positive. Positive culture allowed discontinuance of the amoxicillin, which probably caused the drug eruption in the first place.

Case 4

A vesicular rash was discovered at the left outer canthus of an 8-month-old infant. Tentative diagnosis of ophthalmic herpes simplex lead to Tzanck smear, herpes culture and topical acyclovir therapy. Both the Tzanck smear and HSV culture were negative. A bacterial culture then grew coagulase positive staphylococci.

Comment: Unfortunately, a clinical diagnosis of HSV infection required expensive antiviral therapy. Negative HSV culture led to bacterial culture and a diagnosis of bullous impetigo, relieving the family of the worry associated with herpetic infection.

Results

The cultures yielded clinically useful results in all cases. In order to validate all culture results, we would ideally have performed second, independent viral cultures. Technical and economic restraints did not permit such a comparison. In the instance where a second culture was ordered, a case which truly challenged the specificity of the test, our culture result was confirmed.

Direct comparison of HSV culture and Tzanck smear results occurred in 30 patients (Table 4). In these instances, a differential diagnosis of herpes simplex or zoster (including varicella) was established. Interestingly, after satisfactory experience with

TABLE 4

Culture versus Tzanck Smear

	Tzanck(+)	Tzanck(-)
Culture (+)	10	5
Culture (-)	7	8

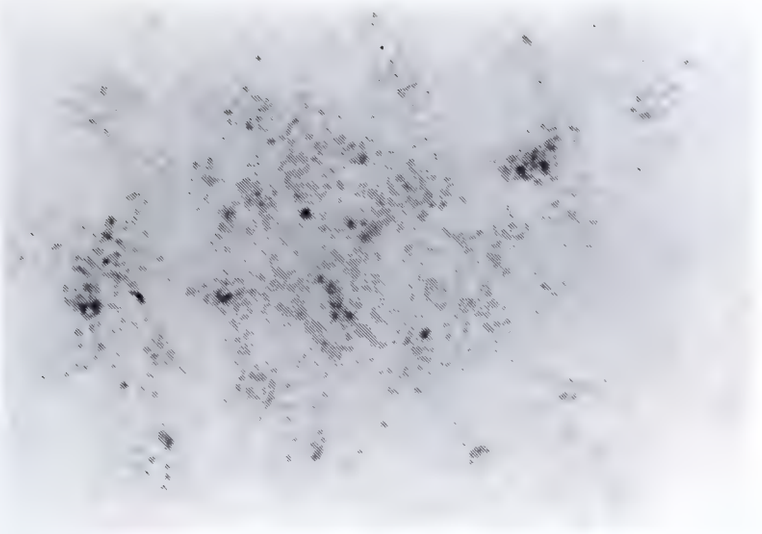


Fig. 1

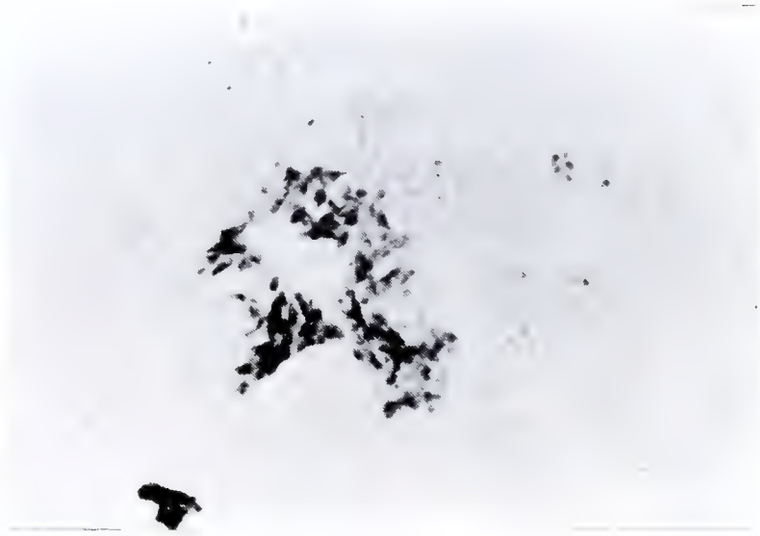


Fig. 2

the cultures, many physicians stopped ordering Tzanck smears, thereby providing their own clinical validation of HSV culture.

In these 100 patients there were 39 positive, 60 negative, and one "equivocal" findings. The clinical sensitivity and specificity were 93% and 100% respectively, based upon no false positives and three false negatives (two on the basis of a strong clinical diagnosis of herpes simplex with Acyclovir® therapy, and one with an HSV-II fluorescent antibody titer of 1:1,280). Any disagreement by the attending physician constituted a designation of a falsely negative result. The predictive value of a positive test was 100%, and of a negative test 95%. The sensitivity of human fibroblastic culture is 91.9%, and the specificity, 100%[10].

Comparison of HSV culture and Tzanck smear results appears in Table 4. When compared to the final clinical diagnosis (Table 5), negative culture correlated strongly with diagnosis of varicella/zoster infection, and the Tzanck smear proved quite insensitive in lesions more than 48 hours old (sensitivity = 67%)[10]

TABLE 5
Clinical Diagnosis

Culture	Diagnosis	Number
Positive:	HSV-Genital	20
	HSV-Oral	7
	HSV-Other	10
Negative:	Specific Infections	
	Herpes zoster	15
	Staphylococcus	5
	Candidiasis	4
	Trichomoniasis	1
	Non-specific	
	Genital Infections	4
	Pregnancy Screening	37

Conclusions

We show that cultures for herpes simplex provide clinically relevant and cost-beneficial information in a small hospital-medical clinic environment. Used selectively in conjunction with Tzanck smears and bacteriologic cultures, the Ortho Diagnostic Cultureset Test® kit proved highly reliable and yielded clinical benefits in several especially difficult cases. Interpretation of test results by the pathologist could be made directly without the occurrence of doubtful results.

ACKNOWLEDGMENTS

We thank Laure Aurelian, PhD, Herpes Diagnostic Services, Baltimore, Md., for her cooperation in providing the culture results in Case 2. The physicians of the Medical Staff of Wilcox Memorial Hospital were helpful and supportive in clinical correlation and follow-up. Lastly, and crucially, we acknowledge the highly competent performance of culture testing by Robin Masuda, MT, (ASCP), Sandra Teshima, MT, (ASCP), and Collette Madden, MT, (ASCP). Ms. Brinkworth was supported by a summer student scholarship grant from the Kauai Medical Group.

REFERENCES

1. Peter JB, Bryson Y, Lovett MA: Genital herpes: Urgent questions, elusive answers. *Diagnostic Med* 1983; 6:2-10.
2. Naib ZM, Nahmias AJ, Josey WE: Cytology and histopathology of cervical herpes simplex infection. *Cancer* 1966; 19:1026-31.
3. Turner R, Shehat Z, Osborne K, Hendley JO: Shedding and survival of herpes simplex virus from "fever blisters." *Pediatrics* 1982; 70:547-9.
4. De la Maza LM, Peterson EM: Genital infections. *Clinics in Lab Med* 1985; 5:121-35.
5. Demko G: Rapid detection of herpes simplex virus (letter). *Am J Clin Path* 1984; 82:133-4.
6. Package insert, Ortho Diagnostics Cultureset, p 18.
7. Feder HM, Long SS: Herpetic whitlow. *Am J Dis Child* 1983; 137:861-3.
8. Layzer RB, Conant MA: Neuralgia in recurrent herpes simplex. *Arch Neurol* 1974; 31:233-7.
9. Corey L, Adams HG, Brown ZA, Holmes KK: Genital herpes simplex virus infections: Clinical manifestations, course and complications. *Ann Int Med* 1983; 98:958-72.
10. Phillips PE, Magliolo RA, Stehlich ML et al: Retrospective evaluation of the isolation and identification of herpes simplex virus with Cultureset® and human fibroblasts. *J Clin Microbiol* 1985; 22:255-8.

Red blood count: A valuable clue in the diagnosis of thalassemia

Robert T.S. Jim, MD*

In no other hematologic disorder is the red blood count (RBC) more useful and valuable as a diagnostic clue than in the diagnosis of thalassemia. Higher than normal red blood counts are frequently found in thalassemia[1-6], but the disproportionate increase in RBC, together with normal or low hemoglobin, is unique to thalassemia trait and milder forms of thalassemia intermedia and is not seen in any other anemia.

Half of all the thalassemias seen in this study show elevated RBC (85 out of 157 patients) (Table 1, Fig. 1). Even before other hematologic parameters are known, a high RBC immediately presents a diagnostic and valuable clue to the diagnosis of thalassemia trait. The combination of a high RBC, reduced mean corpuscular volume (MVC) and reduced mean corpuscular hemoglobin (MCH), normal hemoglobin or slight anemia in a Chinese or Filipino is practically diagnostic for thalassemia trait.** The higher the hemoglobin, the higher the RBC (Fig. 2). The highest RBC occurred where there was no anemia, i.e., up to 8 million/cmm. In the more severe intermedia and major forms, there is progressive reduction in RBC, but the wide difference between RBC and hemoglobin is still apparent. The elevated RBC appears to have no relationship to age, sex, race or type of thalassemia (alpha or beta). Thalassemia minima (beta) and alpha thalassemia silent carriers (alpha-2 thalassemia) show no hematologic abnormalities and must be diagnosed by other means such as family study, reticulocyte counts, alpha/beta hemoglobin chain synthesis ratio or DNA analysis [7-10].

In the anemia of other chronic diseases, elevated RBC is not seen and the MCV and MCH are only slightly reduced and not to the extent seen in thalassemia or iron deficiency anemia. The high RBC and relatively low hemoglobin in mild thalassemia has allowed a mathematical formula to be devised which can distinguish uncomplicated thalassemia trait from iron deficiency anemia (discriminant function or DF and MCV/RBC ratio)[2-11]. In iron deficiency anemia, elevated RBC are not seen. The RBC in iron deficiency may be normal and falls as the anemia becomes more severe. In thalassemia trait and mild intermedia, negative DF and decreased MCV/RBC ratio values occur, compared to increased DF and increased MCV/RBC ratio values.

As thalassemia becomes more severe (severe intermedia and major) increased DF and MCV/RBC ratio values are found similar to iron deficiency, making these formulae of no value in distinguishing severe thalassemia from iron deficiency. Conditions which lower the RBC, such as inflammation, infection, drugs, uremia, malnutrition, alcohol, bleeding, pregnancy and infancy, also invalidate the diagnostic usefulness of these formulae. Because it is difficult to remember these formulae as well as the values for normals, thalassemia trait and iron deficiency, they are rarely used by the clinician or even by the hematologist. A high RBC alone or red cell distribution width (RDW) obtained from the Coulter Counter S plus can provide a rapid simple screening differentiation between mild thalassemia (normal) and iron deficiency anemia (increased). Unfortunately, the older Coulter Counters do not provide the RDW. When iron deficiency complicates thalassemia, the RBC becomes less helpful, but, the red blood cell in thalassemia can change size and show greater anisocytosis and an increase in RDW. A high RBC, reduced MCV and MCH, minimal anemia and the racial background are more helpful in the recognition of mild thalassemia.

In non-thalassemic erythrocytosis (polycythemia vera, stress polycythemia, erythrocytosis secondary to hypoxemia, obesity, renal cysts or cancer, hepatoma, fibroids, smoking, etc.) increases in RBC are accompanied by a proportionate increase in hemoglobin and hematocrit and normal RBC indices. The normal MCV and MCH and higher hemoglobin levels in non-thalassemic erythrocytosis are clearly distinct from thalassemia trait. Reduced MCV and MCH may be seen in polycythemia vera due to iron deficiency. The high incidence of duodenal ulcer, qualitative platelet defect and therapeutic phlebotomies can all lead to iron deficiency in polycythemia vera. In most cases, however, the hemoglobin is not reduced to levels seen in thalassemia trait. In one patient of Japanese ancestry with RBC

(Continued on page 433)

* Professor of Medicine
University of Hawaii
School of Medicine

** Thalassemia is most prevalent among Chinese and Filipino people and has also been found in a Hawaiian-Puerto Rican-Fijian[6], in Spanish, Portuguese, Italian, Sicilian people, and in Vietnamese, Thai and Laotian refugees in Hawaii.



HAWAII'S OLYMPIC MOVEMENT

"Let the Games begin"



Roger Morey, Chairman
U.S. Olympic Committee/Hawaii

With these words young men and women from nearly 200 countries will compete in the world's premier athletic event: The 1988 Summer Olympic Games. Their goal? To demonstrate to their country, and to the world, that they are the best.

As they began their training many years ago, people in Hawaii, and throughout the United States, began their work, too. But it wasn' training, it was fundraising. This, perhaps, is the most difficult part of the Olympics.

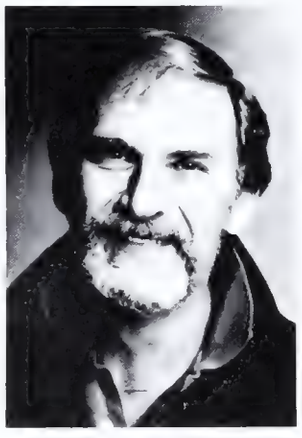
Of all participating nations only one, the United States, does not provide financial support to its athletes. Funding comes entirely from corporate and individual gifts and sponsorhips.

State committees are formed to meet goals established at the national level. In the previous quadrennium, the four year period preceeding the 1984 Games in Los Angeles, the goal in Hawaii was $25,000.00. This quadrennium the goal was raised to $100,000.00! An increase of 400%! It has been four of the longest, albeit rewarding, years of my life. The spirit and commitment of the individual members has made it worthwhile.

Most of the money collected came from local companies: Honfed, Hilton Hawaiian Village, 1st Interstate Bank, and Eagle Distributors. And now, with a lot of help from Pacific Business News, other local businesses will be helping too. A portion of the costs of the ads you see on these pages will go to the Olympic Committee.

The individual contributions are just as important. At the annual Tinman Triathlon, Maryknoll High School student volunteers collected nearly $400.00 from the triathletes and their families. Throughout the quadrennium Committee members, neighbors, business contacts, and co-workers have made contributions to help the United States "Go for the Gold".

I am indebted to Pacific Business News, especially Barbara Scott, for the work represented in this magazine. My appreciation extends to them, to the advertisers in this magazine who made the project possible, to the Hawaii/U.S. Olympic Committee members, and to all of the people in Hawaii who have demonstrated their support for America's Olympic Team.



COVER ILLUSTRATION: Commercial artist Ron Hudson designed and created the cover illustration for the U.S. Olympic Committee of Hawaii. He has won close to 60 local and national design awards, primarily for his excellent work in airbrush design. His work can be seen on several local music album covers, and numerous calendars and posters.

HAWAII'S OLYMPIC MOVEMENT

A Crossroads Press advertising supplement to Pacific Business News, Hawaii Medical Journal, Hawaii Dental Journal, Hawaii Bar News, and The Balance Sheet.

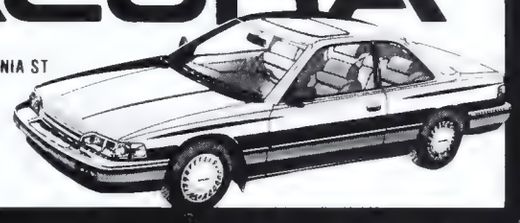
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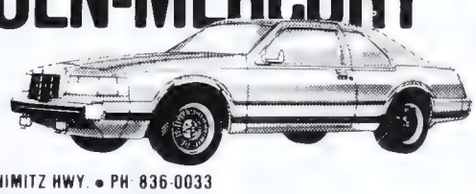
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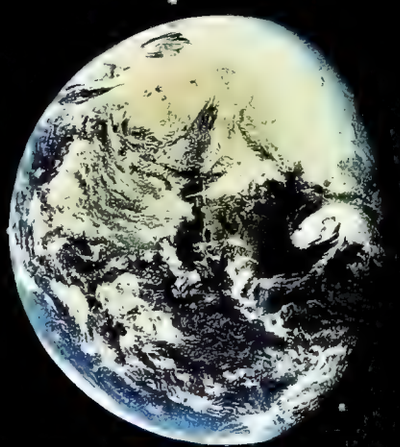
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Beyond the call

Understanding the Olympic Games

By Barbara Scott

On September 17, the XXIVth Olympic Games will begin in Seoul, South Korea. Over 2 billion people are expected to watch the Games on television. That's half of the world's population.

To record the emotions of the athletes, sports documentary specialist Bud Greenspan will capture on film stirring behind-the-scenes Olympic stories that the television cameras will miss. He calls his project "The 16 Days of Glory!" There is no better description for the Olympic Games.

The real drama behind the Olympic Games for U.S. athletes is the clearing of debt incurred during years of training. Talk to the three Olympics-bound Hawaii athletes, and you will realize how much more it costs to live in paradise. With no suitable training facilities locally to attract Mainland competitions, our athletes must fly to at least five Mainland meets yearly at approximately $2,000 each. Add to this the coaching and equipment costs, and a family or spouse spends $12,000 plus yearly. Multiply this times four to six years of training, and we're talking about enough money to buy a new Mercedes convertible. At least the car could be partly tax deductible — training is not.

Why are the Olympic Games worth the huge personal sacrifice? I talked to two of Hawaii's Olympic hopefuls, and they gave the same answer. Just making the U.S. team is more important than ever winning a medal. For a brief moment, athletes from around the world come together outside of the bounds of their government's political philosophies. They are just people hoping to be the best in the world at what they enjoy doing.

When Baron Pierre de Coubertin revived the Olympics in 1896, he hoped the Games would: (1)demonstrate that a national program of physical training would develop healthier, happier citizens through character building; (2) teach the principles of fair play and good sportsmanship; (3) teach that sports should be played for enjoyment and fun, not money; and (4) stimulate international good will and peace.

To athletes who comprise the U.S. Olympic Team, the original philosophy of the Games continues. The Olympics are still designed around amateur athletes, except in a few categories, and the criteria for participation is covered in detail in Rule 26 of the International Olympic Committee Charter.

Working on the Hawaii Olympic Committee, and designing this project, I have heard many complaints, primarily from non-athletes, about the disadvantage that U.S. athletes face over other countries that fund all the training of their athletes. Some wonder whether these funded athletes should be considered amateurs. The answer is "yes." Why should the United States feel that it is unfair for other countries to put an emphasis on athletes training and excellence when we have the same choice to support our best? We have chosen as a nation to ignore our athletes and to let the burden of their training fall on their parents. It is really amazing that U.S. athletes do as well as they do in the Olympics, since many of our best may be unable to afford the training hardships.

What makes athletic training so important to nations that it is worth huge expenditures of money? National pride and the development of leadership qualities to guide future generations. As the parent of a teen-age equestrian, I understand how much of a difference athletic training has made in her development. She has been forced to learn organizational skills and responsibility that will make her a successful business person in the future. These young athletes have so much drive and determination, and they never quit.**What better training for our future government leaders?**

Why have we all become so complacent about the Olympic Games? Misconceptions. Most people do not understand the foundations of the Olympic Games. Who is eligible to compete? What does the U.S. Olympic Committee do? How are the Olympics funded? What criteria are used in selecting the host city? The answers to these questions and more follow. You'll also meet two local families whose children are Olympics-bound and one family whose daughter is still awaiting Olympic trials.

What is the ultimate goal of this project? To raise money for the U.S. Olympic Committee and our local athletes. The U.S. Olympic Committee (USOC) is the central coordinating body for amateur sports in the United States. It is the sole agency in the U.S. whose mission involves training, entering, and underwriting the full expenses for the U.S. teams in the Olympic and Pan American Games. The USOC is funded totally by donations and required $133.4 million dollars to operate from 1984-1988. (See chart on page 9.) Each state is asked to support this effort. Hawaii's goal for 1984-1988 was $100,000. We reached our goal last month, but it was difficult. Our goal for the next four years will be even larger.

Locally, a new committee is being formed to raise funds for our national team members. These are some of the best athletes in the nation, and they need our support. About 10 Hawaii athletes are members of a national team. These national teams compete both in the U.S. and internationally, and funding is critical. Each team member is expected to raise his or her own travel funds until they make the Olympic or Pan Am teams. Many more Hawaii athletes have nationally competitive skills but not the funds to join a national team. We can help our Hawaii athletes through organized donations and a possible low-interest loan program. We can also establish an "adopt an athlete" employment program designed to place serious athletes in jobs with flexible working hours to allow for training and competition.

Understanding the Olympic Games is very important in the quest for more funding for local athletes.

Participation in the Olympic Games

The Olympic Games are still primarily for amateur athletes as outlined by Rule 26 of the International Olympic Committee (IOC) Charter. Five sports were granted eligibility changes at the 91st Session in October 1986. The current eligibility guidelines state:

"A. The following regulations are based on the principles that an athlete's health must not suffer, nor must he or she be placed in a social or material disadvantage as a result of his or her preparation for and participation in the Olympic Games and international sports competitions.

"B. All competitors, men and women, who conform to the criteria set out in Rule 26, may participate in the Olympic Games, except those who have:

"1. been registered as professional athletes or professional coaches in any sport; except where changes were approved at the 91st session in October 1986.*

"2. signed a contract as a professional athlete or coach in any sport before the

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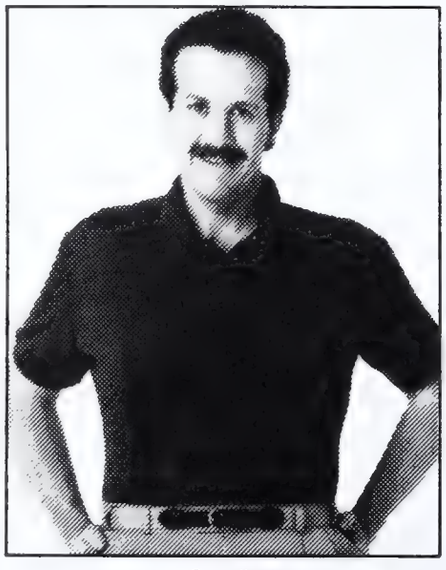
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official closing of the Olympic Games;

"3. accepted without knowledge of their International Federation, national federation or NOC, material advantages for their preparation or participation in sport competition;

"4. allowed their person, name, picture or sports performance to be used in advertising, except when their International Federation (IF), National Olympic Committee (NOC) or national federation has entered into a contract for sponsorship or equipment. All payments must be made to the IF, NOC or national federation concerned, and not to the athletes.

Current Eligibility Changes

In October 1986 at the 91st Session, the IOC Executive Board recommended — as agreed upon by the International Federations concerned — and approved the report of the Eligibility Committee, which defined these eligibility conditions:

Athletics (track and field): Professionals in other sports may take part in track and field events at the Olympic Games.



Soccer, considered by some to be the world's most popular sport, drew the largest crowds at the Olympiad in Los Angeles. The U.S., however, failed to qualify for the quarterfinals.

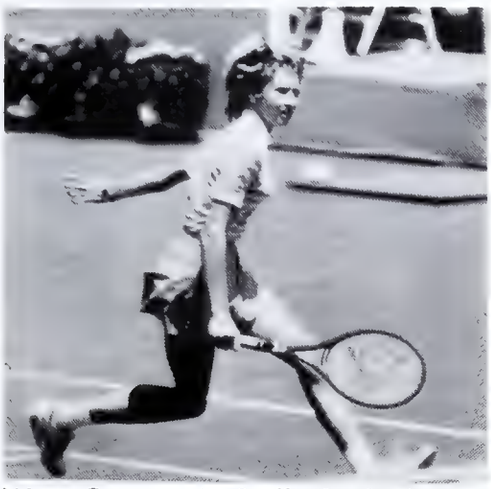
Equestrian (horsemanship): Professional riders may complete in their disciplines, subject to the approval and regulations of their respective NOC or national federation and, through that organization, the International Equestrian Federation.

Football (soccer): The rules for the Olympic tournament and elimination rounds for 1980 and 1984 are also to apply for 1988. I.e., all players are eligible to participate, except those from Europe and South America who have taken part in World Cup matches.

Ice hockey: All players, including those who have or are presently playing as

professionals for the National Hockey League (NHL) of North America, may become members of Olympic teams, subject to the final approval of the International Ice Hockey Federation.

Tennis: Athletes must agree not to receive payment for playing in the Olympic Games and for the two weeks of the Games; and up to two weeks beforehand, they also must suspend all endorsement contracts. For the 64 men in the Olympic tournament, they must be eligible and available to play in the Davis Cup; for the 48 women, they must be willing to play in the Federation Cup. The tennis players must live in the athletes' village.



West Germany's Steffi Graf, then a virtual unknown, captured the women's singles tennis crown at the 1984 Olympics, where tennis was a demonstration sport.

Minimum Age Limits (Rule 27)

Canoe/Kayak and women's gymnastics: 15 years old.

Football (soccer), men's gymnastics, shooting, and team handball: 16 years old.

Boxing and cycling: 17 years old.

Equestrian three-day event and show jumping: 18 years old.

Bobsled and wrestling: 19 years old.

Citizenship

In general, only national citizens of a country entered by their respective National Olympic Committee may take part in the Olympic games and represent their country. All disputes about citizenship are settled by the IOC Executive Board.

If an athlete has represented one country in international competitions, he or she may not represent another country, unless:

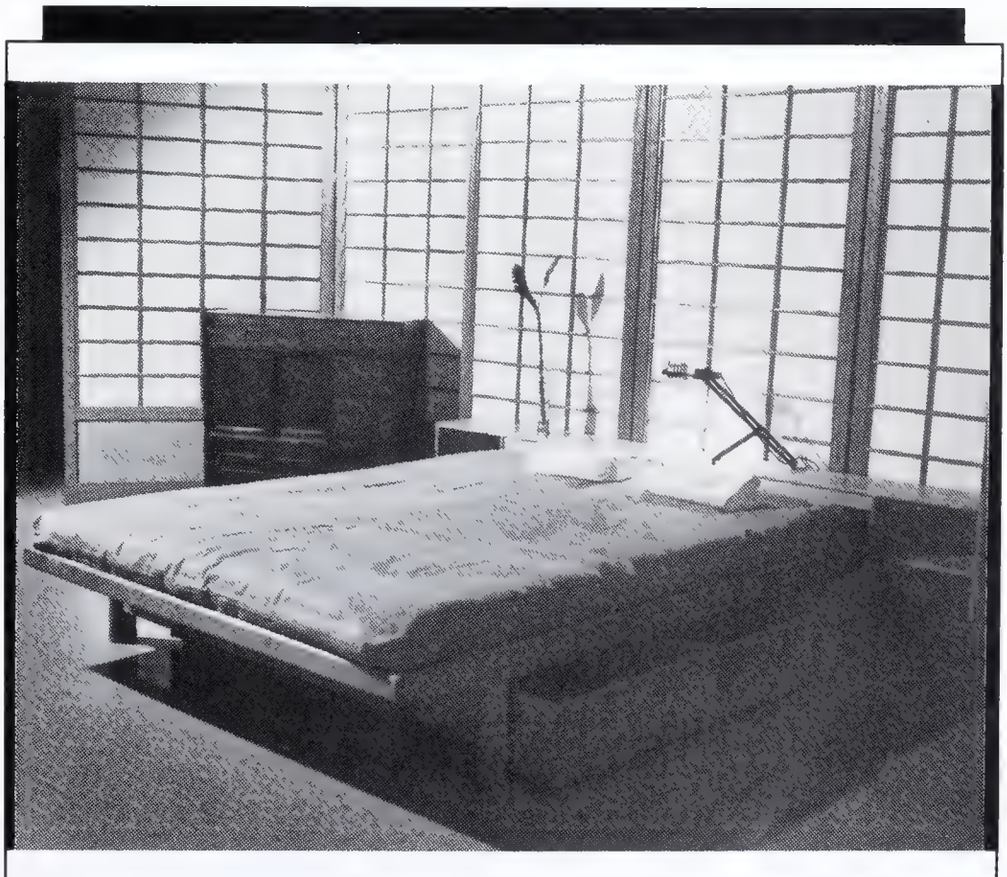
- the athlete acquires his or her spouse's nationality by marriage;
- the athlete represents the country of his or her birth, but can opt to take the nationality of his or her mother or father;
- the athlete becomes naturalized and then serves a waiting period, which is normally three years.



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The United States Olympic Committee

The United States Olympic Committee, an organization of organizations, is the central coordinating body for amateur sports in the United States for sports on the programs of the Olympic and Pan American Games, or those wishing to be included.

The USOC is recognized by the International Olympic Committee as the sole agency in the United States whose mission involves training, entering and underwriting the full expenses for the United States teams in the Olympic and Pan American Games.

The USOC also supports the bid of American cities to host the Winter or Summer Olympic Games, or the Pan American Games and, after reviewing all the candidates, votes on and endorses one city per event as the U.S. bid city.

Funding The United States Olympic Committee

USOC Corporate Sponsors, Licensees, and Fundraising

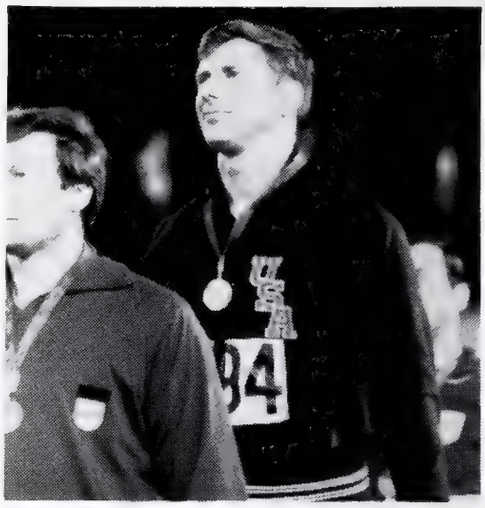
Ambitious goals have been set by the USOC for raising funds to develop, train, and select athletes to represent the United States in the Pan American and Olympic Games. The United States Olympic Movement is not funded by the government, as it is in most other countries. Funds are raised through several different program in the U.S.

The corporate participation program plays an important role in the USOC's development effort. American corporations contribute 50 percent of the USOC's quadrennial budget through financial, product, or in-kind contributions. These corporate sponsors are encouraged to advertise their sponsorship of the U.S. Olympic Teams.

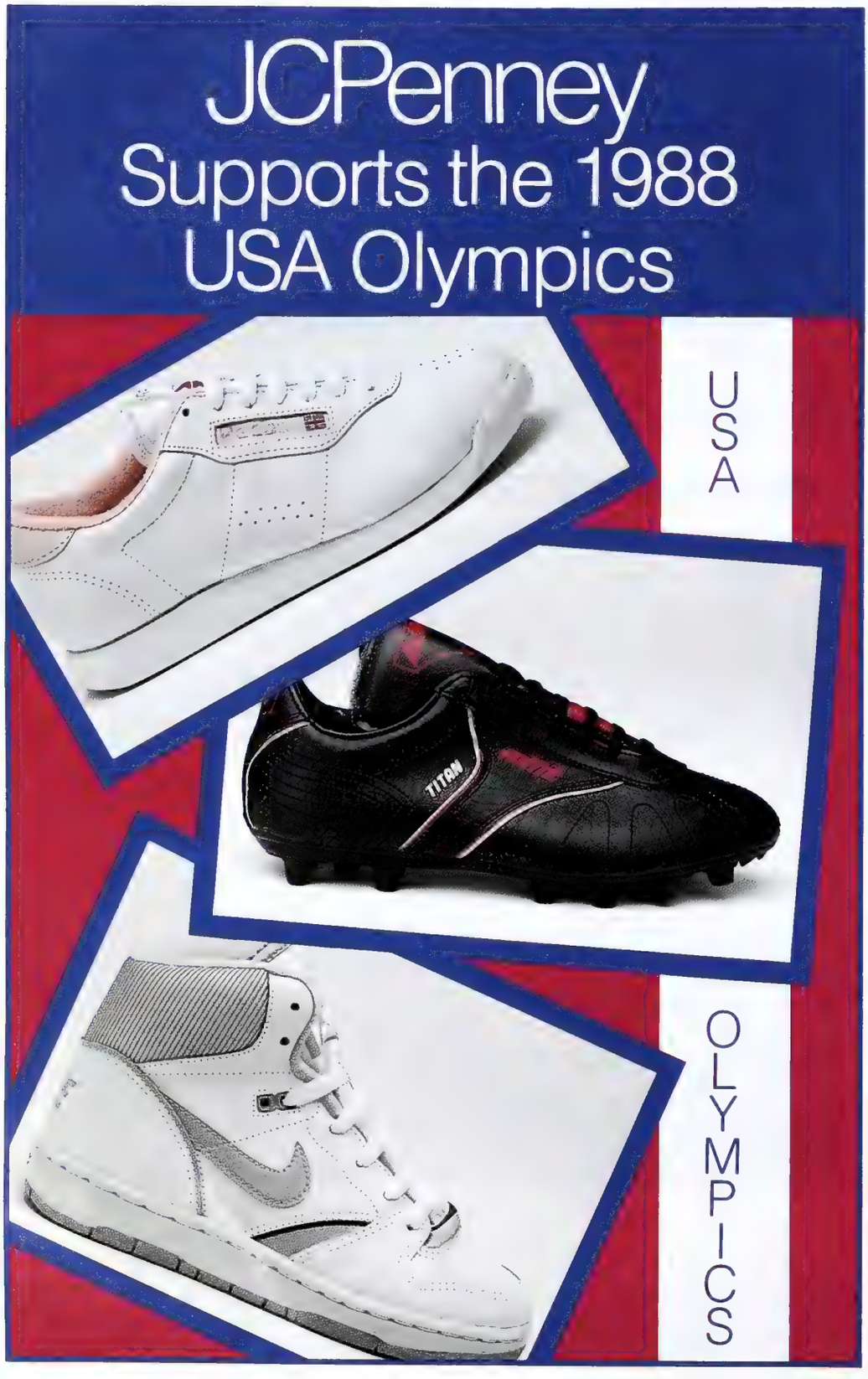
The USOC has developed a state fundraising program. The USOC has appointed volunteers in each of the 50 states and the District of Columbia as state fundraising chairmen. Each state is given a quota of funds to raise over a four-year period of time. The chairmen assist in organizing special events within their state to raise funds for the Olympic movement in the United States. (See chart below)

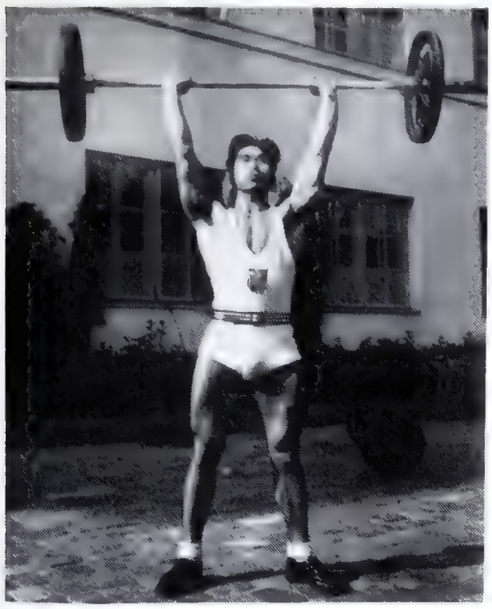
The State Income Tax Check-off program is an additional way the American public can support the U.S. Olympic Team. Citizens filing annual state income tax forms now have the opportunity to contribute a part of their income tax refund *($1.00 minimum)* to the U.S. Olympic Committee. Since 1981 the State Tax Check-Off program has raised more than $1,440,000. As of December 1987, California, Colorado, Delaware, Idaho, Illinois, Louisiana, Pennyslvania and Rhode Island were participating in this program. Citizens interested in having this check-off program added to their State's Income Tax forms are urged to write letters to their local legislators showing their interest.

Another method of raising funds is through licensing arrangements, whereby manufacturers are authorized to manufacture products for retail distribution in the United States in return for a percentage of sales. These items display the



American discus champion Al Oerter stands at attention during the 1964 Olympic victory ceremony in Mexico City. This was the last of four consecutive Games in which Oerter won the gold medal in the discus.





Tommy Kono, from Hawaii, who set the Olympic record in weightlifting's lightweight class in 1952, was also a three-time Pan American Games champion from 1955-1963.

USOC emblem and, where permission has been granted by the respective Olympic Games Organizing Committees, those emblems as well. Such items include posters, clothing, pins, and toys.

Along with the USOC's fundraising efforts, the Olympic Job Opportunities Program (OJOP) allows companies to financially support elite American athletes. This program offers potential U.S. Olympic athletes an opportunity to gain employment with the necessary time off for physical training and for participation in national and international competitions.

The USOC's Budget by Quadrennium

Years	Budget
1973-1976	$ 9 million
1977-1980	$ 43 million
1981-1984	$ 88.7 million
1985-1988	$133.4 million

Budget Breakdown for the 1985-1988 Quadrennium
(Based on expenses)

Amount	Item	Percent
(in millions)		
	Athlete Support	
$ 18.9	Olympic Training Centers	14.2%
16.7	Sports Development Grants	12.5
12.7	Sports Medicine & Science	9.5
12.4	Games Preparations	9.3
8.6	U.S. Olympic Festivals	6.4
6.1	Public Information	4.6
5.6	Olympic Games	4.2
2.5	Operations Support	1.9
2.3	Pan American Games	1.7
2.0	World Universtiy Games	1.5
1.7	Handicapped sports	1.3
.5	International Programs	.4
.6	Other	.5
$ 90.6	**Total Athlete Support**	68.0%
$ 18.7	Administration	14.0%
17.7	Fundraising	13.2
3.1	Capital Improvements	2.3
3.3	Other	2.5
$133.4	**TOTAL BUDGET**	100%

Olympic Television

Though a portion of the broadcast rights fees now pay much of the Olympic Games freight, the Games were not televised until 1936; then, the Berlin Games were shown only to German citizens.

The Games were first televised to the United States in 1960 and, except for NBC's live coverage of the 1964 Opening Ceremony in Tokyo, were not shown live until the 1968 Summer Games. Events were taped for the 1960, '64 and '68 Winter Games, as well as the 1960 and '64 Summer Games.

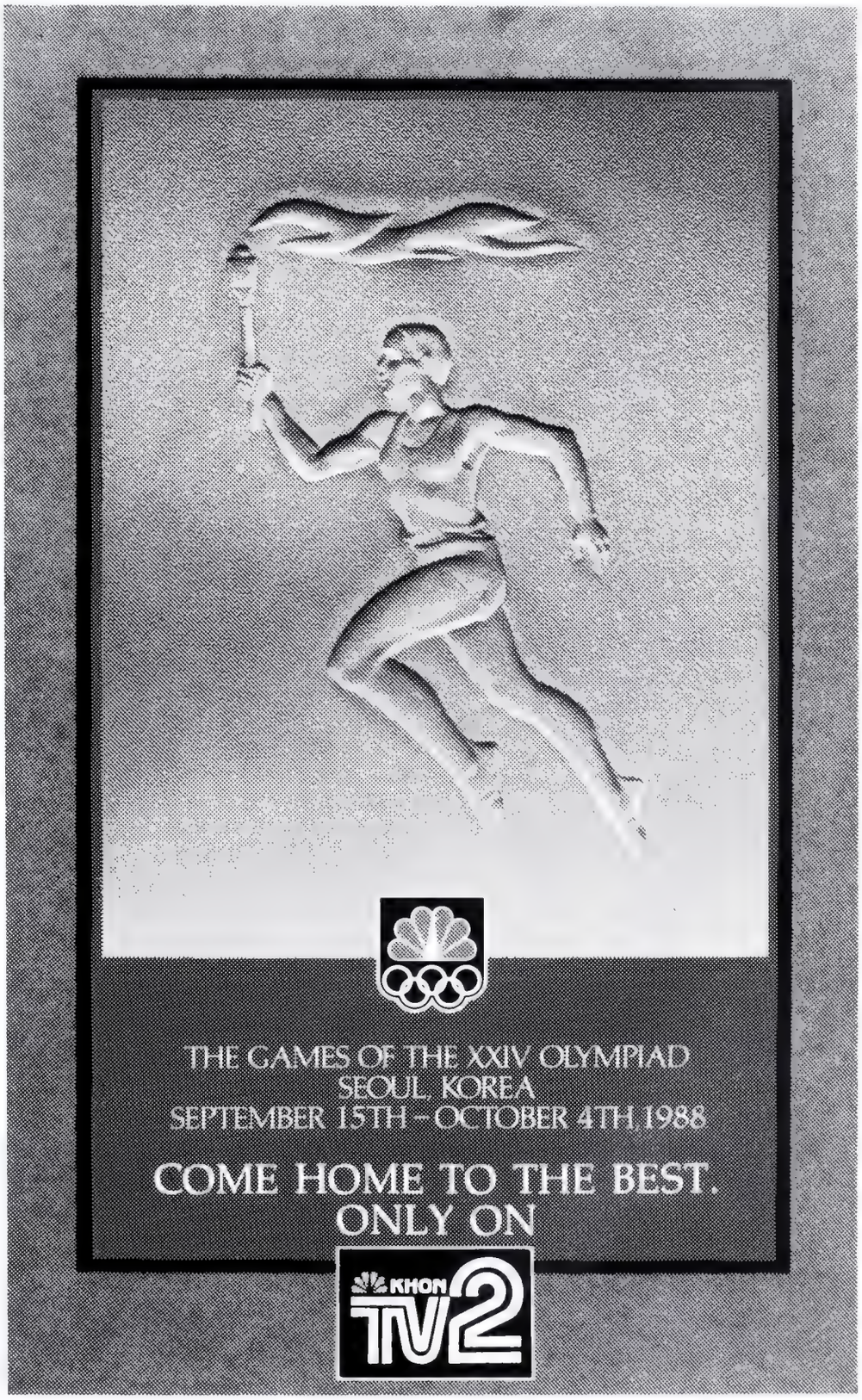
Following is a chart of each Olympic Games televised to the U.S., the respective television network, and the amount paid for individual rights fees.

Winter Games TV Coverage

Year	Location	Network	Amount Paid
1960	Squaw Valley, Calif.	CBS	$50,000
1964	Innsbruck, Austria	ABC	$597,000
1968	Grenoble, France	ABC	$2.5 million
1972	Sapporo, Japan	NBC	$6.4 million
1976	Innsbruck, Austria	ABC	$10 million
1980	Lake Placid, N.Y.	ABC	$15.5 million
1984	Sarajevo, Yugoslavia	ABC	$91.5 million
1988	Calgary, Alberta, Canada	ABC	$309 million

Summer Games TV Coverage

Year	Location	Network	Amount Paid
1960	Rome, Italy	CBS	$394,000
1964	Tokyo, Japan	NBC	$1.5 million
1968	Mexico City, Mexico	ABC	$4.5 million
1976	Montreal, Canada	ABC	$25 million
1980	Moscow, Soviet Union	NBC	$87 million
1984	Los Angeles, Calif.	ABC	$225 million
1988	Seoul, Korea	NBC	$300 million





Marjorie Gestring was 13 years and nine months old when she won a diving gold medal at the 1936 Olympic Games — the youngest American gold medalist in history.

Organization of the Olympic Games

Host City Selection

From 1991 onward, the Olympic Games will be awarded to a host city seven years prior to the celebration, at the International Olympic Committee's (IOC) annual Session. Prior to this new rule, the Games have been awarded to the host city six years in advance. At the IOC's 91st Session in 1986, the 1992 Olympic games and 1992 Olympic Winter Games were awarded to Barcelona, Spain, and Albertville, France, respectively. The 1994 Olympic Winter Games will be awarded to a host city during the IOC's Session on Sept. 15, 1988, just two days prior to the opening of the Games of the XXIV Olympiad in Seoul, South Korea.

In placing a bid for the Olympic Games, a city presents to the IOC its plan for staging the Olympic Games. The IOC then evaluates the bids and selects the city best prepared to host the Games. It should be noted that the Olympic Games are awarded to a city, **not** a country, although each city has the backing of and is usually selected as a bid city by its respective National Olympic Committee.

The IOC approves the dates of the Games, which may not exceed 16 days of competition, including the opening day.

Olympic Medals

Fans and athletes alike realize the mystique and prestige that goes along with winning an Olympic gold medal. But not many think about the details behind the medals.

History shows that Olympic awards in general, and medals in particular, have undergone many changes since the first Modern Summer Games in 1896.

Until the 1978 Olympic Charter, concrete regulations for the development of medals were not established. That charter specified that Olympic medals must be at least 60 mm in diameter and at least three millimeters thick. The gold and silver medals must be made of 92.5 percent pure silver, and the gold medal must be gilded with at least six grams of gold.

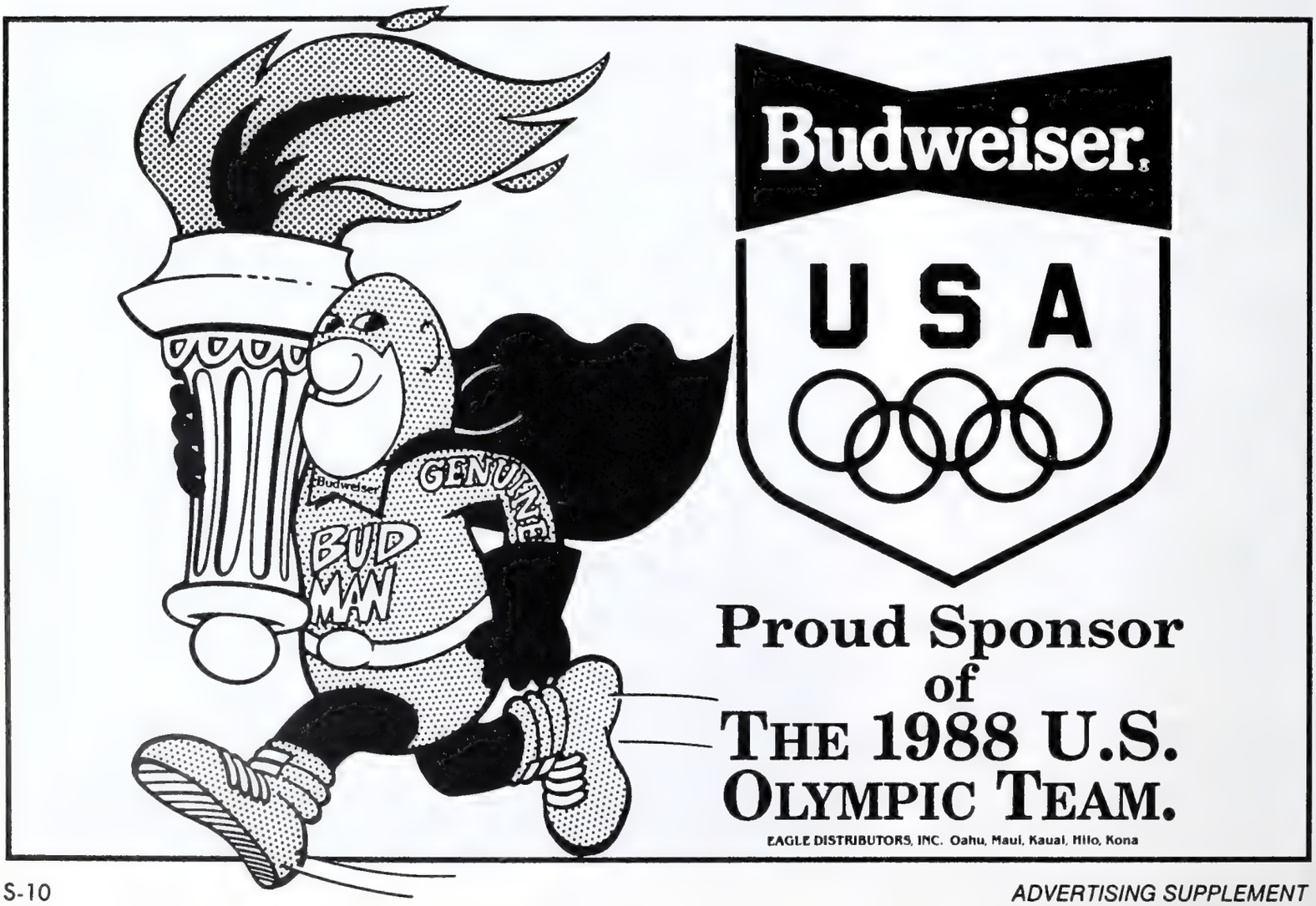
The designing and production of Olympic medals has always been the responsibility of the host city's organizing committee (i.e., the Los Angeles Olympic Organizing Committee in 1984).

At the first modern Games in Greece in 1896, medals were given only to first- and second-place finishers. The winner received a silver medal and the runner-up a bronze medal. The winner was also given a crown of olive branches, while the second-place finisher settled for a laurel-branch crown. The 1896 medals were 50 mm in diameter.

The 1900 Games in Paris remain the only Olympics where no medals were awarded. Winners were given valuable pieces of art instead.

Medals for the Olympic Winter Games enjoy no such tradition or consistency in design. Designs have ranged from walking snowmen to snowflakes to a horse-drawn chariot.

A special thank you to the USOC Public Information Division for the use of their factual information and photos.



HAWAII'S OLYMPIC ATHLETES:

Profiles In Dedication

By Jan-Michelle Sawyer

Most people would agree that Baron Pierre de Coubertin had an excellent idea when, at the turn of the century, he proposed a revival of the Olympics. To be sure, the Olympic Games have become the ultimate event for everyone, from those who love sports to the casual observer.

Despite the formidable barriers of language and politics, the Olympics have transcended the differences that mark the world in which they are held. For the contestants themselves, there is the excitement of meeting and competing with strangers in a strange land. For the rest of us, there is the excitement that always accompanies the pursuit of excellence in sports — the great individual performances, the style, the stamina, and the incredible skill.

For many athletes, representing the United States in the Summer Olympics is a dream that burns as brightly as the torch that symbolizes the Games.

Next month, the right to be called an Olympic champion will be the vision and dream of three Olympic hopefuls from Hawaii: Mike Harbold, flatwater kayaking; Traci Phillips, flatwater kayaking; and Kevin Asano, judo.

All of these athletes have recently secured a place on the United States Olympic Team. For the most part, the hardest phase of their journey is done. Just getting to the Olympics is a challenge that leads people to endure endless hours of training and to put education and careers on hold. There are pre-race trials, strenuous workouts at training camps, and the matter of financial expense.

AN INVESTMENT OF EMOTIONAL AND FINANCIAL SUPPORT

Today, it is difficult for the athlete to make it to the top of his or her sport without support in the form of subsidization. Securing financial backing and staying within the Olympic requirements of amateur status is no easy feat.

Parents of athletes are the first to invest in their child's Olympic dream of "going for the gold." It is the parent who lends emotional support. And it is the parent who appropriates financial needs.

A NATURAL ATHLETE

Bob Harbold of Hawaii Kai helped his son Mike get started in flatwater kayaking in 1986 by buying a used one-man kayak. In the past two years that Mike has been paddling competitively, the

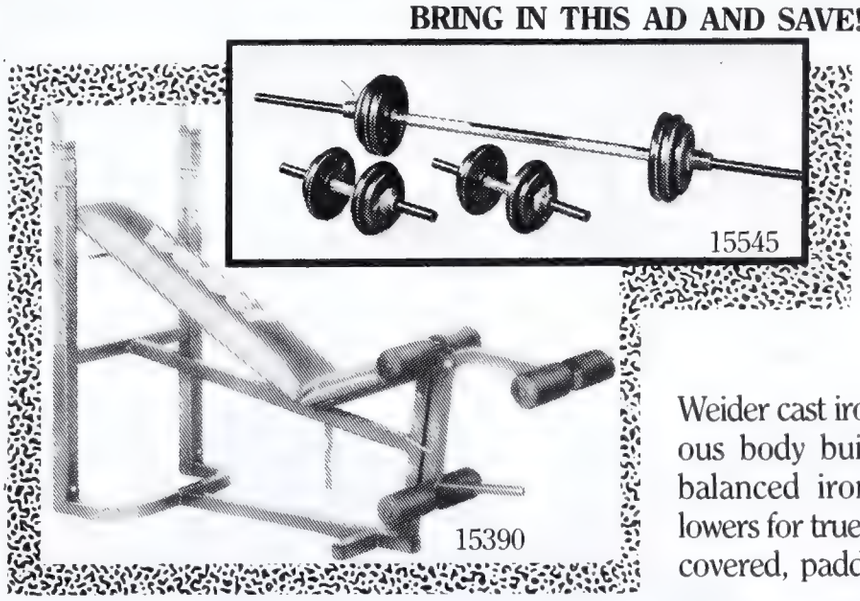


Michael Harbold has been nominated for the prestigious Olympic Spirit Award by the U.S. Olympic Committee. This award will be given at the close of the summer games. Dan Jensen received the honor for the Winter Games in Calgary.

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Mary and Bob Harbold.

Harbolds have spent approximately $10,000 to finance their son's kayaking.

"It's a full-time job," said Harbold, who is an automated-publishing technician with the Navy Publication and Printing Office. "My wife, Mary, and I tracked our son's progress, and we realized that he was turning in faster times in his heats. The money spent is so little in comparison to the great feeling our family has that he's representing Hawaii and the whole of America at Seoul."

Despite the satisfied feeling of accomplishment the Harbold family is enjoying, they did indeed go it alone before Mike made the team. The National Paddling Organization supports paddlers who are Olympics-bound by paying for lodging and transportation. However, until an athlete makes the Olympic team, financial support rests squarely on the shoulders of the parents.

Year-round training is required to succeed in a sport that demands strength, speed, and endurance. "Mike trains primarily in Hawaii and recently spent some time training in Florida and then in Lake Placid before he went to Europe for international meets," said Harbold. "When we first got started in flatwater kayaking, there wasn't anyone here who made kayaks, and so we had to buy from Europe and have the craft shipped to Hawaii. You can imagine shipping a flatwater kayak throught the airlines!" continued Harbold. "Just a couple of years ago, there wasn't much in the name of organized support in Hawaii, but that is beginning to change, and I'm glad that our family and the various canoe clubs have been a part of the effort to organize the sport."

SIXTH IN THE NATION

Nadine Takai of Waipahu is sixth in the nation in the breast stroke and has been swimming competitively since she was 7 years old.

The Pearl City High School graduate has been preparing arduously for the Olympic trials scheduled for Aug. 8-14. A typical day begins at 5:30 a.m. with two hours of training at the U.H.-Manoa pool. Nadine resumes training later in the day with an hour and a half of lap swimming and sprints.

Erik Takai, Nadine's father, is an engi-

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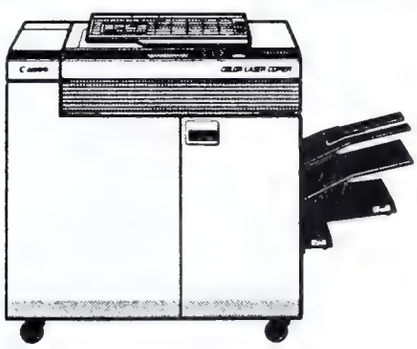
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Takai family: Erik, Nikki, Nadine, Ross, Naomi, and Mark

neer with the U.S. Navy. "Our financial fundraising efforts for Nadine were nearly impossible because of the fact that I work for the government. The conflict-of-interest clause prevented us from doing much fundraising," said Takai.

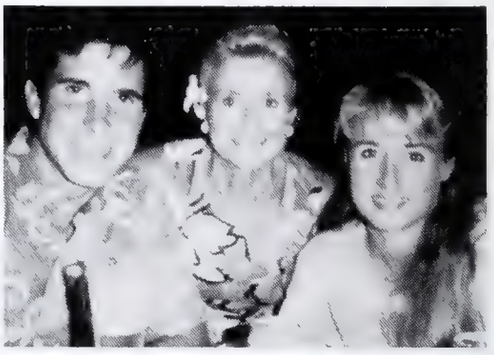
"Our financial commitment has easily totaled $40,000," added Nadine's mother, Naomi. "As Nadine got better, it simply got more expensive to send her to the Mainland to participate in qualifying heats. I have always thought that if there was a need . . . something positive would come of it. We believe in supporting all of our children in what they want to do."

"Realistically, you can't be poor to compete in the Olympics," said Erik Takai. "Lots of kids have the potential, but because of financial constraints most of them won't have an opportunity to develop their talent. I'd like to see more programs set up to support our young athletes. At the present time, Hawaii doesn't have an established sponsorhip program that includes individuals as well as corporations. Obtaining financial support is really left to the individual," he concluded.

KAMAAINA JOINS WOMEN'S KAYAKING TEAM

Traci Phillips of Honolulu is on the United States women's flatwater kayaking team. Although the U.S. women have not won an Olympic medal since the 1964 Rome Olympics, the depth of this year's squad could change that. Even though being on the team doesn't guarantee being able to compete in Seoul, Traci has secured a place on the women's K4 team. Further trials will determine who represents the U.S. women in the K1 race. As the top U.S. woman kayaker in 1988, Traci has an outstanding chance of representing the U.S. in the K1 race.

Marjorie Howe, Traci's mother, agrees that obtaining "up-front money" can be the most difficult phase a parent of an athlete has to encounter. "Traci wrote dozens of sponsorship letters requesting financial assistance," said Howe. "She got some sponsors, and all donations were sent to the National Paddling Committee in Traci's name." These donations were particularly important since Traci decided to live in Newport Beach, Calif., where all the national women kayak team members trained. Being a newcomer to flatwater kayaking, she only started competing in 1986, Traci felt that she needed to live with other competitors to progress faster. She couldn't afford a car, so a mountain bike became her only source of transportation. Her largest expense was the purchase of two kayaks. One stayed on the East Coast for competitions there, and the other stayed in California. "We have spent about $25,000 for equipment and travel over a 2½-year period," added Howe. "I'm just thrilled she's going to Seoul."



Greg Barton, another U.S. Olympic team member in flatwater kayaking, Marjorie Howe, and Traci Phillips.

IT'S BOTH A PERSONAL AND GLOBAL AFFAIR

The best of America's athletes will gather next month to show the world what they are made of — and among them will be this group of Hawaii's finest.

They'll come, bare their skills, and release the countless hours of training in their moment for glory. These athletes can be proud of themselves and the country and families they represent.

Most of us viewing the Olympic Games this September can only imagine what the Olympics must represent to the athletes and their families. The obvious commitment of emotional and financial support is an appreciated quality that deserves recognition and hearty thank yous. Here at home, we'll be watching these young men and women of Hawaii and sending to them our special message of "aloha and mahalo."

Jan-Michelle Sawyer, owner of Marketing Network of the Pacific, is a marketing consultant and photographer.

THE QUEEN'S MEDICAL CENTER

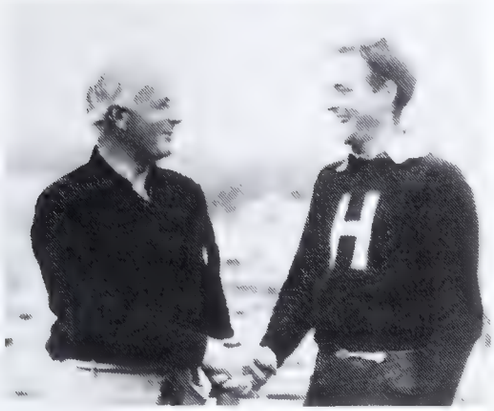
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Olympic Trivia



Yachtsmen Paul Smart (left) and Hilary Smart remain the only father-son combination to win gold medals while competing in the same event at the same Olympics.

The only U.S. father-son combination to win gold medals while competing together in the same event in the same Games was Paul and Hilary Smart, the 1948 Star class yachting champions. Father and son Bill and Carl Buchan were also each gold medalists in the 1984 Olympic Games in Los Angeles, but in different events. Bill (and crew member Steve Erickson) captured the gold medal for the U.S. in the Star class, while son Carl teamed with crew member Jonathan McKee to win the gold medal in the Flying Dutchman class.

A notable U.S. mother-daughter(s) combination in the Olympic Games was mother Maribel Vinson-Owen and daughters Laurie (Laurence) and Maribel Owen, who were all figure skaters. All three were killed on Feb. 15, 1961, in a plane crash en route to the 1961 World Championships. Maribel Vinson skated in the women's singles event in 1928 and '32, winning the bronze medal the latter year. In 1936 she competed with George E.B. Hill in the pairs event and placed fifth. She later became the first woman sports journalist for the New York Times before her death. Both her daughters skated in the 1960 Rome Games; Laurie was sixth in the women's singles, and Maribel placed 10th in the pairs competition with Dudley Richards.

The first husband and wife to compete while married were Frances Schroth, a swimmer in 1920, and her husband, George Schroth, a water polo player in the 1924 Olympic Games. They combined for four Olympic medals. Frances won a gold and two bronze in swimming, and George was a member of the U.S. bronze medal-winning water polo squad. Unfortunately, the Schroths also have the distinction of being the first married Olympic couple to be divorced, something that happened in 1925.

The most generations of one family to compete in the Modern Olympic Games is three. Chester Nelsen was the first member of his family to compete in the Olympics in 1928. He was followed by son Chester Jr., in 1948, and grandson Donald in 1964. All three Nelsens were cyclists.

The oldest American gold medal winner is Galen Spencer, who was 64 years old when he competed in archery in 1904.

The heaviest American Olympian of all time is easily wrestler Chris Taylor, a 1972 bronze medalist in the super-heavyweight division, who weighed in at 410 pounds in Munich. Despite his weight, he was a good technical wrestler and competed in both the freestyle and Greco-Roman disciplines at the 1972 Olympic Games, losing early in the Greco-Roman competition. Taylor might have been a hero in professional wrestling and had signed a lucrative contract following the Olympics, but he died in 1979 of complications from hepatitis and phlebitis.

Equestrian J. Michael Plumb has been a member of seven consecutive U.S. Olympic teams through the 1984 Games, where he was a gold medalist.

Army Gen. George S. Patton was the first American ever to compete in modern pentathlon, finishing fifth overall at Stockholm in 1912.



Bob Beamon set a long jump world record in Mexico City's high altitude in 1968. Beamon's leap of 29'2½" has stood for 19 years and may be contested at the 1988 Games in Seoul.

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Mystery on the high seas, the "Michelob Mystery Series", begins September 24th on the Windjammer. Agatha, you solve this one!

MLC will produce a series of no less than four mystery dinner cruises aboard the Windjammer, Rella Mae. Original scripts written specifically for the "Michelob Mystery Series" will be acted out before the audience of amateur sleuths.

Opening night will be a gala celebrity event, with the net proceeds going to the U.S. Olympic Committee. It's all part of the Windjammer Cruises's Fifteenth Anniversary Celebration.

It will be a full moon night when all passengers board the cruise at 8:30 PM, anticipating something mysterious to happen, yet not knowing what. It's the perfect night for re-experiencing the Windjammer, solving the case, and helping to raise money for the Olympic team. That's the American way. Columbo would be proud! For more information contact Michael Collins, at MLC, 599-5266, or Debi Halcro at Windjammer Cruises, 922-1200.

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of 7.8 million and polycythemia vera, the hemoglobin was decreased to 14.6 gms, mimicking thalassemia trait; however, with iron therapy the hemoglobin increased to 18.5 gms, a value not seen in thalassemia trait.

The author has not seen nor is aware of thalassemia occurring in the Japanese in Hawaii. In a Japanese (HY) with essential thrombocythemia, leucocytosis and microcytic hypochromic erythrocytosis (RBC 6.13 million), the hemoglobin of 15.3 gms approached the upper thalassemia hemoglobin level for a corresponding thalassemia RBC, but the racial and other hematologic findings clearly distinguished between the two conditions. In some polycythemia vera with reduced MCV and MCH, iron deficiency is not present and the higher RBC and lower hemoglobin may be due to more rapid proliferation of RBC or slower rate of hemoglobin synthesis. Another possibility may be that in Chinese or Filipino persons with polycythemia vera, thalassemia trait may also be present.

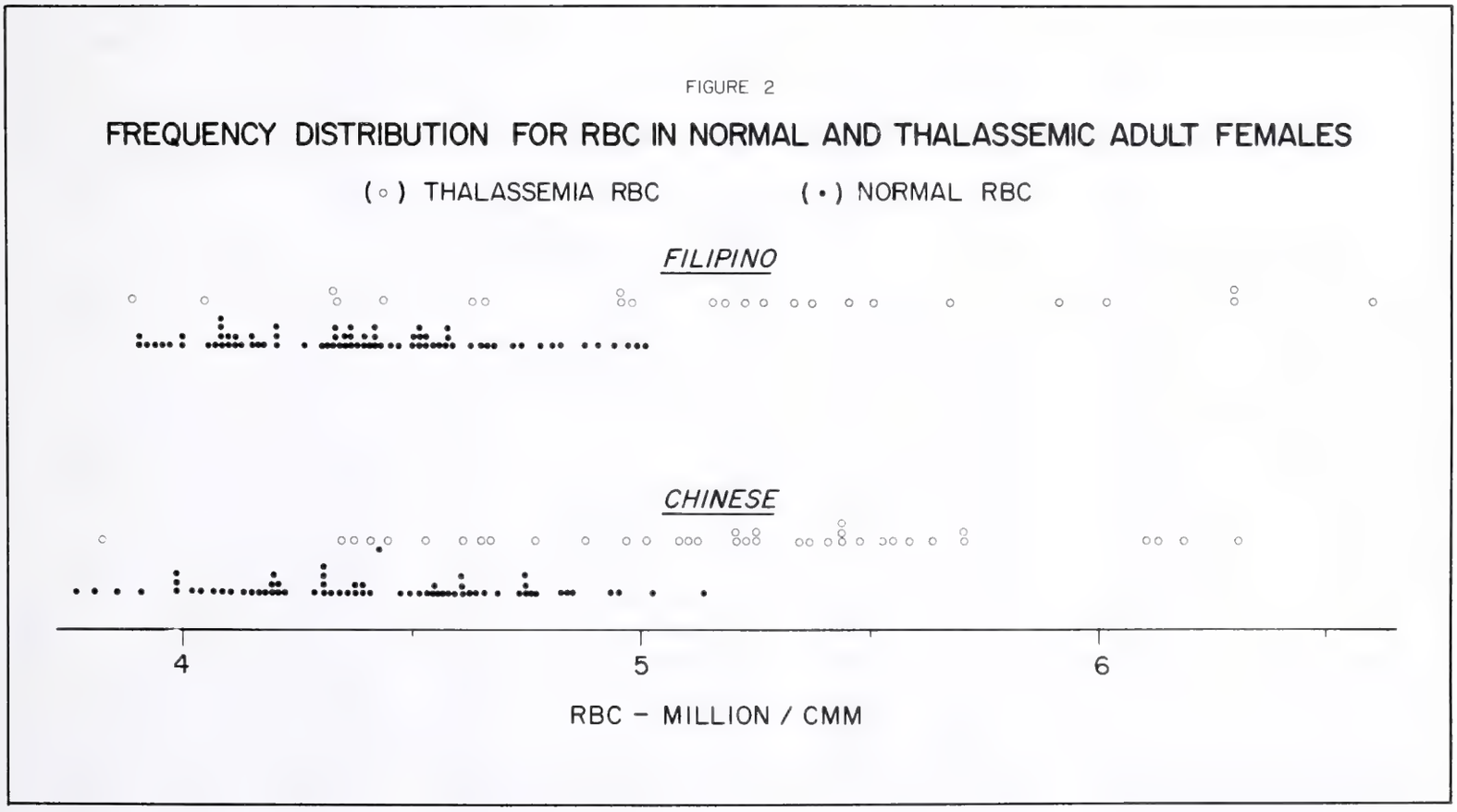
Normal RBC and mildly reduced MCV (77-80), MCH (25-27) and hemoglobin (11.2-12.9 gms), may be found often in children aged three months to 10 years, but it is distinguishable from thalassemia trait where elevated RBC is found for similar hemoglobin levels (Table 1). The mechanism for a high RBC in mild thalassemia may be an increase compensating for the microcytosis.

Finally, in the evaluation of thalassemia, morphologic examination for red blood cell stippling, target and bridge cells, serum ferritin, a family study, hemoglobin electrophoresis, and fetal and A2 hemoglobin levels must be done. Alpha and beta hemoglobin chain syntheses and DNA analysis for gene deletions are available in more specialized laboratories.

REFERENCES

1. Weatherall DJ: The thalassaemia syndromes. *Blackwell Sci Pub* p.46. Oxford, 1965.
2. England JM and Fraser PM: Differentiation of iron deficiency from Thalassaemia trait by routine blood-count. *Lancet* 1:449. 1973.
3. Klee GG, Fairbanks VF, Pierre RV and O'Sullivan MB: Routine erythrocyte measurements in diagnosis of iron-deficiency anemia and thalassemia minor. *Am J Clin Path* 66:870. 1976.
4. Walford DM, McPherson K and Deacon R: Discrimination between iron deficiency and heterozygous thalassaemia. *Lancet* p. 323, Feb. 10, 1979.
5. Wintrobe NM: Clinical hematology, p. 885. Lea & Febiger, Philadelphia. 1981.
6. Jim, RTS: Hemoglobin H disease in Hawaii, update 30 years later. *Hawaii Med J* 47:376. 1988.
7. Kan YW, Schwartz E and Nathan DG: Globin chain synthesis in the alpha thalassemia syndromes. *J Clin Invest* 47:2525. 1968.
8. Wintrobe NM: Clinical hematology, p. 886. Lea & Febiger, Philadelphia. 1981.
9. Schwartz E: The silent carrier of beta thalassemia. *New Eng J Med* 281:1327. 1969.
10. Weatherall DJ: The thalassemias, p. 7, Churchill Livingstone. 1983.
11. Mentzer WC Jr: Differentiation of iron deficiency from thalassemia trait. *Lancet* 1:882 (letter). 1983.

FIGURE 2



(Continued)

Table 1

Pertinent Clinical and Hematological Data in Thalassemia

Initial	Age	Sex	Race	RBC x10⁶cmm	Hg gm	MVC u³	MCH uug	MCHC %	DF	MCV/RBC	TYPE Thalassemia*
Normal Values						**82-99**	**27-34**	**31-36**	**0**	**12.5**	**RDW**
R.T.	74	M	Chinese	8.00	13.7					8.5	Beta
				6.85	12.8	58.7	18.6		-15.6		16.1
R.H.	67	M	Chinese	7.75	15.5	62	20		-25.8	8.1	Alpha
C.M.	74	M	Filipino	7.63	16.7	67	22		-27.6	8.7	Indet.
J.I.	67	M	Chinese	7.06	14.0						
				6.93	15.0	69	21		-16.3	9.9	Alpha
F.B.	56	M	Filipino	7.00	14.6	65.7	20.9	31.8	-14.3	9.3	Indet.
Mr.L.	Adult	M	Chinese	6.83	14.1	67	20.6	30.7	-13.8	9.8	Beta
L.A.	24	M	Filipino	6.83	15.5	66	22.4	34.6	-21.8	9.6	Alpha
W.L.	Adult	M	Chinese	6.80	12.6	Mycrocytic hypochromic					Beta
R.W.	66	M	Chinese	6.77	14.5	65	21.3	33.0	-14.3	9.6	Alpha
G.Z.	Adult	M	Chinese	6.68	14.6	65	21.9	32.5	-14.6	9.7	Indet.
H.L.	22	M	Chinese	6.60	12.6	58	19.4	32.6	-15.0	8.7	Beta
J.F.	Adult	F	Filipino	6.57	12.2		18.8	30.6	-9.1	9.4	Alpha
D.C.	14	M	Ha/Ch/Por	6.53	13.7	Mycrocytic hypochromic					Alpha
E.W.	62	F	Ch/Sc/Eng	6.50	11.7	72.3	21.3		3.9	11.1	Beta
W.M.	Adult	M	Filipino	6.48	14.1	67	21.7	32.7	-13.1	10.3	Alpha
											13.9
J.C.	45	M	Chinese	6.47	13.2	68	20.5	32.3	-12.8	9.7	Beta
C.C.	20	M	Chinese	6.44	12.6	63	19.6	31.5	-9.8	9.7	Beta
E.C.	14	M	Chinese	6.43	12.5	60	19.4	32.8	-12.4	9.3	Beta
A.P.	Adult	F	Por/Spa	6.23	13.7	67	22.1	33.1	-11.2	10.7	Beta
S.Y.	25	M	Chinese	6.33	13.3	Mycrocytic hypochromic					Beta
A.A.	21	F	Filipino	6.27	12.5	63	19.9	31.6	9.2	10.0	Alpha
H.Y.	Adult	F	Chinese	6.30	13.9	69	22.0	32.1	-10.1	10.9	Alpha
F.A.	Adult	M	Filipino	6.23	15.0	71	23.8	34.0	-13.7	11.3	Alpha
A.W.	33	M	Chinese	6.24	12.1	60.2	19.4	32.2	-9.9	9.6	Beta
				6.19	12.9	70.2	20.8	29.7	-3.8	11.3	12.9
H.J.	55	M	Chinese	6.19	13.1	65	21.2	32.2	-8.1	10.5	Beta
W.C.	Adult	M	Chinese	6.17	13.0	68	21.7	31.0	-3.2	11.0	Indet.
M.M.	59	M	Filipino	6.17	13.2	68	21.5	31.9	-7.4	11.4	Indet.
H.C.	35	M	Chinese	6.12	12.4	61	20.4	32.8	-10.6	9.9	Beta
E.L.	Adult	M	Chinese	6.19	13.2	69	21.3	30.9	-6.6	11.1	Indet.
S.P.	Adult	F	Chinese	6.10	10.8	56	17.8	32.2	-7.5	9.1	Beta
J.B.	3	F	Filipino	6.11	11.8	57	19.5	33.6	-11.6	9.3	Alpha
M.W.	39	F	Ha/Ch	6.09	14.2	72	23.2	32.5	0.5	11.8	Beta
A.T.	50	M	Chinese	6.05	13.7	75	22.7	30.6	-3.0	12.3	Indet.
I.E.	Adult	F	Filipino	6.00	10.6	Mycrocytic hypochromic					Alpha
P.B.	Adult	F	Filipino	5.95	13.8	73	23.2	31.4	-5.4	12.2	Alpha
F.V.	58	M	Filipino	5.91	13.0	72	22.0	32.3	-0.5	10.9	Alpha
M.L.	62	M	Chinese	5.91	13.3	69	22.4	32.2	-6.9	11.6	Beta
D.B.	36	F	Filipino	5.90	11.9	63.9	20.1	31.5	-4.9	10.8	Alpha
H.P.	42	M	Chinese	5.84	12.4	61	20.4	32.8	-16.3	10.4	Beta
M.A.	42	M	Ha/Ch/Por	5.76	13.5	71.8	23.5	32.8			Indet.
L.G.	Adult	F	Chinese	5.71	11.8	66	20.7		-0.4	11.5	Alpha
W.B.	24	F	Por/Sp	5.64	12.6	68	22.3	33.0	-4.1	12.0	Beta
A.A.	89	F	Chinese	5.71	15.1	74	26.4		-10.7	12.9	Indet.
C.C.	30	F	Chinese	5.64	11.3	62	20.1	32.4	-3.6	10.9	Indet.
F.L.	81	F	Chinese	5.59	13.7	72.6	24.5	33.7	0.4	12.9	Alpha
G.B.	15	M	Ha/Ch/Sp/ Russ/Ger/ Irish/Por	5.63	11.6	62	20.6	33.0	-5.1	11.0	Alpha
M.M.	29	F	Sicilian/ Sc/Eng	5.57	11.9	65	20.9	32.2	-0.1	11.6	Beta
V.C.	28	F	Filipino	5.65	11.7	67	20.8	30.8	-0.6	11.8	Alpha
W.L.	Adult	F	English	5.56	11.8	66	21.4	32.9	-5.8	11.8	Beta
G.T.	65	F	Chinese	5.55	11.8	65	21.1	32.6	-0.4	11.7	Alpha
J.T.	Adult	F	Chinese	5.53	11.9	Mycrocytic hypochromic					Beta

(Continued)

Table 1 (Continued)

Pertinent Clinical and Hematological Data in Thalassemia

Initial	Age	Sex	Race	RBC x10⁶cmm	Hg gm	MVC u³	MCH uug	MCHC %	DF	MCV/RBC	TYPE Thalassemia*
Normal	**Values**					**82-99**	**27-34**	**31-36**	**0**	**12.5**	**RDW**
M.M.	26	F	Filipino	5.49	10.7	63.1	19.4	30.8	0.7	11.4	Alpha
K.A.	20	F	Ha/Ch/Por/ Sw/Irish/ Eng	5.52	12.5	71	22.7	31.7	-0.5	12.8	Alpha
S.K.	41	M	Chinese	5.48	11.8	64	21.5		0.8	11.6	Alpha
J.P.	40	F	Gua/Sp/ Charmorro	5.48	12.0	73	22.0	30.0	4.1	13.3	Beta
C.N.	54	M	Ha/Ch	5.47	11.8	67.9	21.6	31.8	0.01	12.4	Alpha
L.C.	27	F	Chinese	5.44	12.0	69	22.6	32.8	0.3	13.0	Alpha
V.A.	31	F	Filipino	5.44	12.2	69	22.5	32.1	-3.9	12.6	Alpha
A.T.	38	F	Viet	5.43	11.6	66	21.0	32.5	-0.9	12.1	Alpha
L.B.	37	F	Filipino	5.32	12.1	73	22.8	31.0	3.7	13.7	Alpha
D.K.	Adult	M	Chinese	5.43	10.8	62	20.0		-0.9	11.4	Alpha
B.A.	34	F	Chinese	5.25	11.3	68	21.6	31.4	3.3	12.9	Indet.
A.C.	72	M	Chinese	5.42	13.0	71.7	24.0	33.4	-4.6	13.2	Indet.
A.M.	42	F	Ha/Ch/ Eng	5.40	10.3	63	19.1	30.3	5.6	11.6	Alpha
K.Z.	34	F	Chinese	5.41	12.0	69.3	22.3	32.1	3.8	12.8	Alpha
D.A.	27	F	Filipino	5.36	11.7	68	21.8	31.6	1.0	12.6	Alpha
Y.L.	76	F	Chinese	5.36	12.5						Beta
B.L.	68	F	Chinese	5.25	11.9	72	22.8	31.2	3.8	13.7	Alpha
W.Y.	71	M	Chinese	5.23	11.8	69	22.5	32.8	1.3	13.1	Indet.
A.V.	25	F	Ch/Por	5.22	11.0	63	21.1	33.7	-0.7	12.0	Alpha
Mrs.L.	Adult	F	Chinese	5.21	13.4	81	25.7	31.1	5.3	15.5	Beta
J.A.	32	M	Ha/Por/ Eng	5.21	12.5	75	23.9	31.8	3.8	14.3	Alpha
C.Y.	21	F	Chinese	5.21	11.8	72	22.6	31.7	4.3	13.8	Alpha
P.E.	3-1/2	F	Filipino	5.21	11.1	65	21.6	32.5	0.8	12.4	Alpha
F.E.	25	F	Filipino	5.21	11.4						Alpha
J.M.	47	F	Filipino	5.15	11.0	65	21.3	32.1	1.4	12.6	Indet.
D.H.	76	M	Chinese	5.13	11.6	70	22.4	32.4	3.4	13.6	Beta
J.E.	Adult	M	Filipino	5.13	12.4						Alpha
E.W.	77	M	Chinese	5.12	11.8	74.2	23.1	31.1	6.6	14.4	Alpha -15.7
B.L.	Adult	F	Chinese	5.12	12.4	75	24.5	32.6	4.4	14.6	Alpha
H.L.	79	M	Chinese	5.11	12.5	77	24.5	31.6	5.9	15.0	Indet.
C.L.	39	F	Chinese	5.10	12.2	74	23.9		4.5	14.5	Alpha
S.Y.	39	F	Chinese	5.09	10.3	66	20.2	30.5	6.0	12.9	Indet.
W.C.	16	M	Ha/Ch/ Cau	5.07	9.5	57	18.9	32.8	1.0	11.2	Beta
T.W.	2-1/2	F	Chinese	5.05	10.1	61	20.1	32.3	2.0	12.0	Alpha
	3	F	Filipino	4.97	10.4	66	21.1	31.7	5.6	13.2	Alpha
C.S.	20	F	Filipino	4.95	8.5	55	17.6	31.6	4.1	11.1	Beta
J.R.	60	F	Filipino	4.94	10.2	68	20.6	30.3	13.1	13.7	Alpha
K.A.	22	F	Italian	4.93	10.3	66	21.0	31.5	6.1	5.6	Alpha
E.E.	74	F	Chinese	4.88	9.6	61.8	19.7	31.8	5.5	12.6	Indet.
G.H.	21	M	Chinese	4.84	8.9	77	21.3	24.2	24.2	15.9	Beta
S.G.	6	F	Chinese	4.77	10.7	65	22.4	34.2	3.3	13.6	Beta
	4	M	Chinese	4.74	10.2						Beta
A.A.	48	F	Ha/Ch/ Por	4.66	10.6	71	22.8	32	9.9	15.2	Alpha
G.C.	7 mos	M	Chinese	4.67	9.3	60	20.0	33.1	5.4	12.8	Alpha
F.D.	30	F	Filipino	4.63	8.6	59	19.4	31.1	5.9	12.7	Indet.
	Adult	F	Chinese	4.61	12.6	80	27.0	33.0	8.9	17.3	Alpha
E.Y.	50	F	Chinese	4.45	9.3	66	21.6	32.3	32.9	11.6	Indet.
A.A.	26	F	Filipino	4.44	9.8	66	22.0	33.6	53.2	14.8	Beta
S.Y.	39	F	Chinese	4.41	11.0	75	24.8	32.6	12.1	17.0	Beta
L.D.	69	F	Filipino	4.33	10.2	72	23.1	31.9	13.2	16.6	Alpha
M.C.	23	F	Chinese	4.37	10.2	74	23.4	31.5	15.2	16.9	Alpha

(Continued)

Table 1 (Continued)

Pertinent Clinical and Hematological Data in Thalassemia

Initial	Age	Sex	Race	RBC x10⁶cmm	Hg gm	MVC u³	MCH uug	MCHC %	DF	MCV/RBC	TYPE Thalassemia*
Normal Values						**82-99**	**27-34**	**31-36**	**0**	**12.5**	**RDW**
M.A.	84	F	Ha/Ch	4.33	10.1	74	23.2	31.7	15.7	17	Alpha
J.C.	28	F	Filipino	4.06	9.8	73	24.2	33.1	16.5	17.9	Alpha
C.B.	77	M	Filipino	4.01	7.6	63.9	18.9	29.6	18.4	15.9	Alpha -17.3
N.Y.	30	F	Chinese	3.83	9.2	75	24.0	32.0	21.7	19.5	Alpha
A.U.	15 mo	F	Filipino	3.67	6.0	47			9.9	12.8	Alpha
R.L.	70	F	Chinese	3.44	8.0	77	23.4	30.1	30.1	22.3	Beta
M.F.	2	M	Chinese	3.39	7.2		Microcytic hypochromic				Beta
T.C.	73	M	Chinese	3.00	6.6	76	22.0	29.5	31.6	25.3	Indet.
W.L.	25	M	Chinese	1.84	5.5		Microcytic hypochromic				
H.V.	28	F	Filipino	1.77	4.3	82	24.7	28.9	55.3	46.3	Alpha
J.L.	7	F	Chinese	1.69	2.8		Microcytic hypochromic				Beta
	New.		Filipino	0.23	0.8	76	34.8	34.8			Alpha

* Indeterminate--data insufficient to determine whether alpha or beta type
Alpha thalassemia--normal hemoglobin electrophoresis
Beta thalassemia--increase in fetal and/or A2 hemoglobins

Listed are thalassemia traits (alpha and beta types), thalassemia intermedia beta and thalassemia major (beta)
Alpha thalassemia intermedia (hemoglobin H disease) are not listed.
Clinical and hematologic data for Hemoglobin H disease has been published in the *Hawaii Medical Journal* (Ref. 6)

Table 2

Blood Counts in Chronic Disease

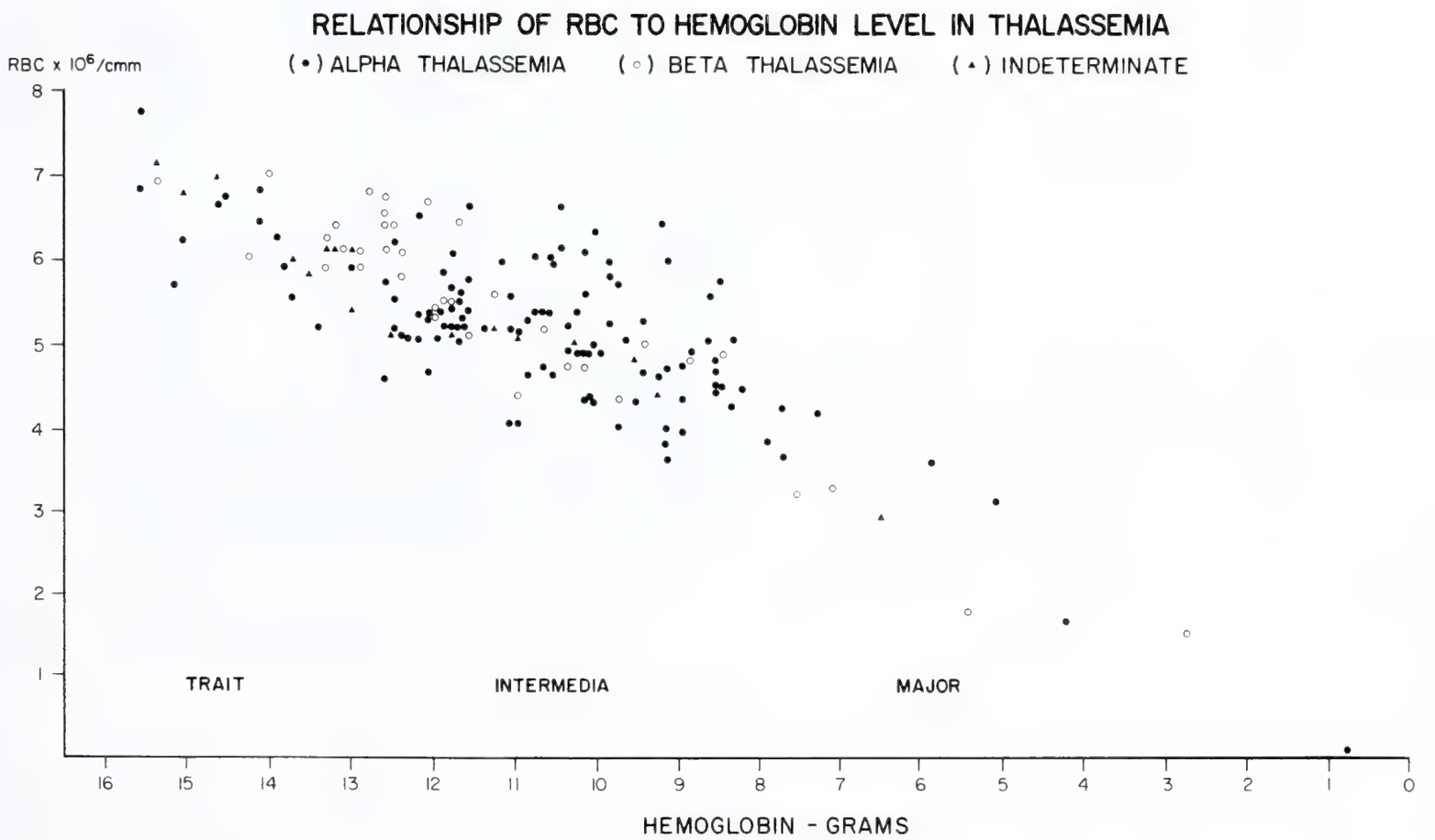
RBCmil.	Hg-gm	MCV	MCH	MCHC	DF	MCV/RBC	Disease
5.22	14.1	78	27	33	2.2	14.9	CGL
4.90	12.4	80	27	33	8.1	16.3	Hypertension
4.34	12.5	80	28	34	13.1	18.4	Infection
4.52	12.3	80	27	32	15.9	17.6	Infection
3.94	10.1	76	25	33	18.1	19.2	Infection
2.57	7.4	79	28	36	36	30.7	Lymphoma
3.24	8.2	80	25	31	35.7	24.6	Myelofibrosis
3.93	9.9	76	25	32	18.1	19.3	H. Spherocytosis
3.59	9.2	80	25.6	31.7	27	22.2	Drug medications insecticide exposure
4.25	10.2	79	23.9	30.6	20.3	18.5	L.E.

Table 3

Iron Deficiency Anemia

Initial	Age	Sex	Race	RBC x 10^6 cmm	Hg gms	MCV u^3	MCH uug	MCHC %	RDW	Clinical Data
Normal Values									**11.5-14.5**	
D.K.	44	M	Ha/Por	5.23	13.6	76	26.1	34		GI bleeding?
J.R.	60	F	Filipino	4.94	10.2	68	20.6	30.1	20	Gastrectomy
A.D.	47	F	Portuguese	4.86	10.3	66	21.2	31.6		Menorrhagia
E.A.	16	F	Ha/Ch/Por/ Irish/Scot	4.72	6.7	53	14.4	26.5		Menorrhagia
M.B.	14	F	Ha/Por/ Irish	4.58	8.2	59	17.9	30.3		Menorrhagia
S.A.	38	F	Ha/Chi	4.52	8.9	63	19.7	31		Menorrhagia
A.O.	53	M	Caucasian	4.50	11.0	77	24.4	31.9		Gastrectomy & alcoholism
H.B.	49	F	Ha/Ch	4.39	8.2	64	18.6	28.8		Menorrhagia
E.T.	4	M	Filipino	4.33	7.4	74	25.7	34.3		Etiology?
F.B.	42	F	Filipino	4.19	11.7	85	27.9	33.2		Menorrhagia
E.C.	37	F	Chinese	4.03	8.3	70	20.8	29.3		Menorrhagia
R.S.	49	F	Filipino	3.84	7.3	62	19.1	30.3		Menorrhagia
L.A.	36	F	Ha/Ch/ Cau	3.76	6.2	57.7	16.5	28.7		Menorrhagia
C.M.	60	F	Japanese	3.60	8.4	74.7	23.2	31.1	22.3	Etiology?
J.K.	24	F	Ha/Ch/Por	3.54	8.4	74	23.9	31.6		Pregnant 9 mos.
T.V.	16	F	Ha/Cau	3.34	6.6	63	19.7	31.1		Menorrhagia
M.A.	66	F	Ha/Chi Cau	3.28	8.4	78	25.7	32.9		Hiatal hernia
G.A.	49	F	French/ Ger/Greek/ Spanish	3.07	7.1	77	22.7	29.2		GI bleeding Rendu-Weber-Osler disease
B.H.	97	M	Filipino	2.79	4.5	53.8	16.1	30		GI bleeding

FIGURE 3



(Continued)

Table 4

Non-Thalassemic Erythrocytosis

Initial	Age	Sex	Race	RBC x 10^6 cmm	Hg gms	MCV u^3	MCH uug	MCHC %	Diagnosis
W.L.	59	M	Chinese	6.47	19.6	88	29.9	34.3	Renal cyst, Polycythemia vera
N.H.	70	M	Chinese	6.45	19.7	90		33.4	
				6.41	21.3				
				6.36	20.7	94		34.3	
				6.33	20.6				
				6.25	18.8	92		35.2	
				6.19	19.4				
				6.14	19.4	89		35.3	
				6.10	19.3	89		35.3	
				6.06	18.4	93.9	30.3	32.2	
				6.00	18.9				
				5.98	19.1				
B.B.	48	M	Portuguese	5.32	18.1	101	34	33.8	Stress polycythemia
J.S.	28	M	Portuguese	6.35	23.8	107	37.4	37.4	Stress polycythemia
				5.37	18.6	102.4	34.7	33.9	Heavy smoker
				5.35	18.5	102.7	34.6	33.6	Heavy alcohol intake
				5.01	15.5	91	30.9	34	
W.A.	46	M		6.39	19	86	29.7	34.8	Polycythemia vera
A.B.	64	F	Caucasian	5.41	16.3	84	29.9	34.6	Polycythemia vera
A.S.	36	M	Negro	8.50	23.0	23.0	Normocytic normochromic		Polycythemia vera
	45			6.95	17.3				
				6.30	17.8	90	29	33	Ca of the prostate
R.K.	44	M	Ha/Ch	6.04	19.6	96	32	33.3	Polycythemia vera
				5.44	17.7	96	32.1	33.4	Hypertension
	Adult		Por/Eng	5.35	17.3	96	32.3	33.7	Polycythemia vera
				5.29	16.9	96	32.2	33.4	
E.B.	68	F	Caucasian	6.43	19.3	92.7	30.1	32.4	Suspected parathyroid adenoma
	Adult		Samoan	7.70	23.4	88	32	34.5	Polycythemia vera
	Adult		Caucasian	7.20	22.2	90	30.5	34.4	Polycythemia vera
	Adult		Japanese	6.35	19.8	90	31.3	34.5	Polycythemia vera
S.K.	60	M	Japanese	5.80	19.4	96	33.7	34.9	Pulmonary fibrosis
C.A.	1 day	F	Caucasian	5.96	20.9	104	35	33.8	Hemorrhagic disease of newborn
M.S.	39	M	Japanese	5.74	17.5	90.5	30.4	33.6	Polycythemia vera
T.M.	40	M	Japanese	6.00	18.7	94.1	30.5	33	Polycythemia vera
R.K.	57	M	Japanese	6.35	19.8	90	31.1	34.5	Polycythemia vera
F.E.	63	F		7.20	22.2	90	30.5	34.4	Polycythemia vera
S.A.	81	M	Chinese	6.20	19.1	92.4	30.8	33.3	Dehydration
L.G.	70	M	Filipino	8.70	23.4	80	26.9	34.2	Polycythemia vera-- Iron deficiency: data insufficient*
	Adult		Filipino	7.64	19.4	78	25.5	33.3	Polycythemia vera-- Iron deficiency: data insufficient*
W.M.	73	M	Portuguese	7.68	18.4	75	23.9	31.7	Polycythemia vera--Iron deficiency: no
H.S.	62	M	Portuguese	7.98	17.8	69	22.3	32.7	Polycythemia vera--Iron deficiency: yes
A.T.	60	F	Japanese	8.17	18.1	69	22.3	35.1	Polycythemia vera-- Iron deficiency: data insufficient*
A.M.	77	F	Japanese	7.80	14.6	61	18.7	30.7	Polycythemia vera--Iron deficiency: yes
				9.02	18.5	66	20.2	30.5	After Rx with iron
M.T.	Adult		Filipino	7.64	19.4	78	25.5	33.3	Polycythemia vera-- Iron deficiency: data insufficient*
G.A.	63	M	Japanese	8.25	19.0	69	23	33.5	Polycythemia vera--Iron deficiency: no
H.Y.	90	F	Japanese	6.31	15.3	79.4	24.3	30.5	Polycythemia vera--Iron deficiency: no (Essential thrombocythemia, WBC 16,500 platelet count 1.148 million/cmm)

*** Data insufficient to determine if iron deficient or not**

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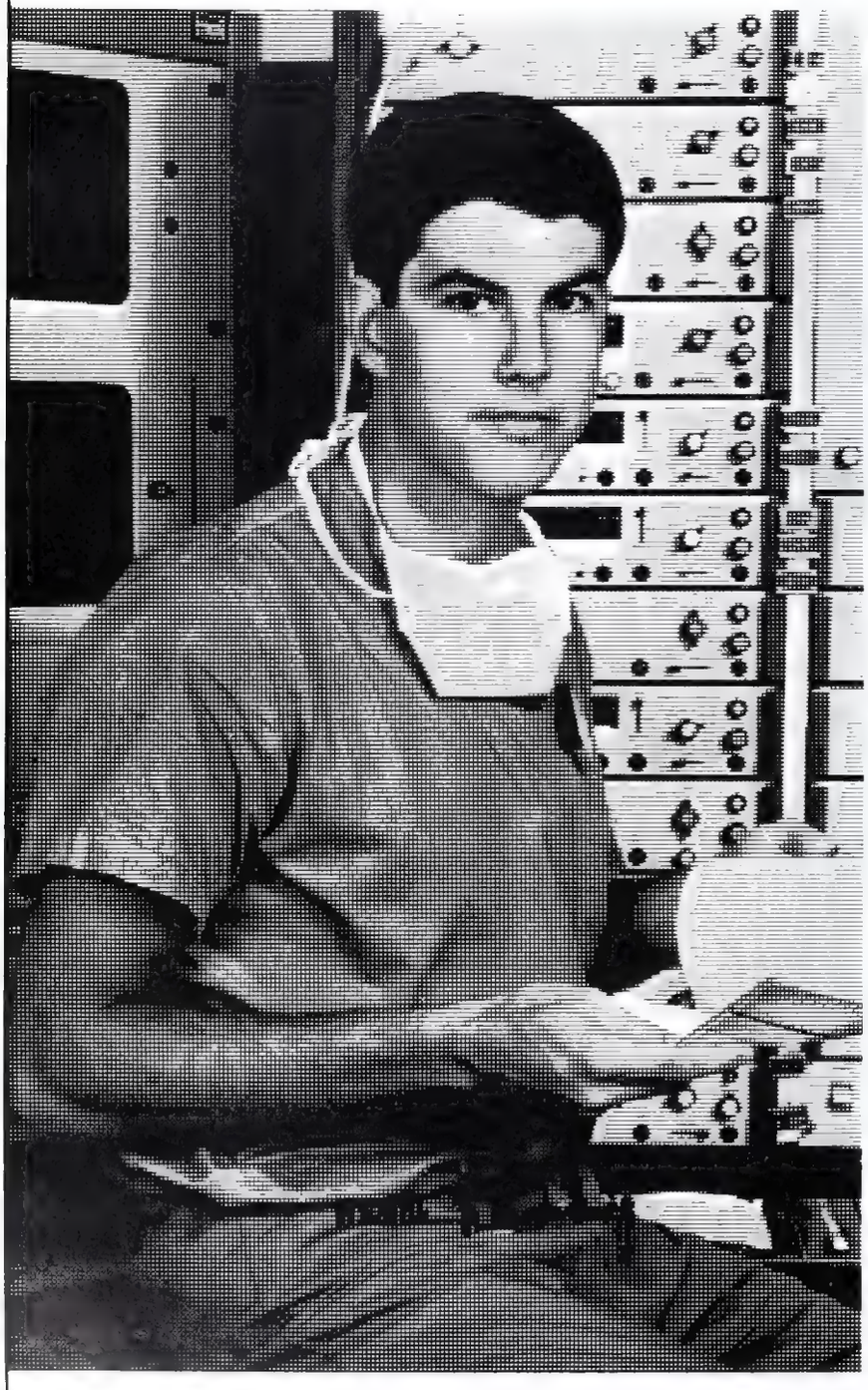
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The Tiger and the Shaman: Towards an understanding of why we tolerate a major cause for death and disability

Georgeda Buchbinder, MD, PhD*

Injury, the leading cause of death for ages 1-44, the leading cause of disability and of Years of Potential Life Lost, is not generally considered to be a health problem. Medical schools do not teach about injury, and only a few schools of public health include it in their curricula. Less than 2% of the federal health research budget goes to dealing with injury, although injury in America claims over 140,000 lives per year, every year. The bulk of health research funds are spent on cancer and heart disease, which mainly affect older people. To put the injury problem in perspective, 58,000 Americans were killed in Vietnam; about the same number to date have been diagnosed with AIDS, half of whom have died. Both AIDS and injury are widely publicized by the media. The public is rightly exercised about AIDS. News of injury generates little public outcry. In the USA AIDS victims are characteristically young men who engage in behaviors that are socially unacceptable, such as i.v. drug use and homosexuality. Injury victims too are young men. They engage in more socially acceptable behaviors, such as drinking alcohol and driving cars or using firearms. Why is it that neither the public nor the health professions show much concern with injury? Could it be that health professionals are the intellectual descendants of Shamans who had difficulty explaining the unexpected? Death from disease is mysterious. The Tiger, on the other hand, is always present and his voracity is no mystery. Therefore, death by tiger attack does not elicit the Shaman's attention.

Injury is indeed a health problem, so devastating that it has been called the last major plague of the young[1]. The dictionary definition of plague is "a malignant epidemic."[2] Technically, the term epidemic means an increase in the number of events over some baseline level. Injury fatality and disability, however, continue at their high level year after year. Injury can, therefore, properly be called endemic. It is endemic with an extraordinary high incidence and mortality, affecting one out of three Americans and killing over 140,000 every year.

All injuries share a common etiology, the rapid transfer of energy from the environment to the victim[3]. This energy can be kinetic, thermal, chemical, electrical, or radiation. This rapid transfer of energy may be intentional or unintentional. If intentional, we call it suicide or homicide; if unintentional, we call it an accident. "Accident" is a prescientific term. It connotes randomness, carelessness, unpredictability or an act of God, but epidemiological studies have shown that injuries are in fact patterned with respect to person, place and time, and are not random events[4].

Injury is the number one killer of young men. Every year one American in three suffers a nonfatal injury severe enough to require medical care or to curtail usual activities for at least a day. Every year over 80,000 people become permanently disabled with brain or spinal cord injuries. Injuries are estimated to cost $75-100 billion each year[1].

In spite of these statistics, injury is not even considered a health problem by much of the health care establishment or by the public. The causes and prevention of injury are not taught in medical schools, and only a few schools of public health teach about injury. A 1981 survey of State and Territorial health departments conducted by the national Environmental Association identified only 12 State health departments that maintained injury prevention programs, and only seven had injury reporting systems[5]. The Hawaii State Health Department does not yet have a coordinated injury control program. Injury, the fourth leading cause of death, receives less than 2% of the federal health research budget[1], most of which is spent on cancer and heart disease, which mainly affect people over the age of 45. Unless many people are killed at once in a natural, industrial or transportation disaster, the news of death or disability due to injury generates little or no public outcry.

There are a number of important similarities between those killed by AIDS, war and injury. AIDS victims are mostly young men. Our war casualties are also largely young men, frequently poor and Black doing their patriotic duty, either voluntarily or by conscription, to save our country. Civilian injury victims are also mostly young men. Ethnic minorities, particularly native Americans and the poor, are also over-represented. However, the elderly are also victims.

Attitudes

Some clues to societal and medical attitudes towards injury have come from physician students at the University of Hawaii School of Public Health. One said that "You really can't do anything about injury because accidents are inevitable." The other said: "Do you know what we emergency docs call motorcycle riders who don't wear helmets? 'Organ Donors.'" A third said, regarding a car crash: "It's his own damn fault. He was drunk and driving too fast." I will explore these and other attitudes.

Lack of intellectual challenge

Health Care Professionals may be considered to be the intellectual descendants of Shamans: The witch doctors and priests whose job it was to heal the sick and to explain the unknown and

(Continued)

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the unexpected. People sickened and died for no obvious reason. The rest of the concerned bystanders were frightened. The "doctor" had to give an explanation. Frequently, the cause was reported as being supernatural, and perhaps punishment for some social transgression.

Treatment and prevention of disease prior to the 19th century had largely to do with restoration of the social order. However, even before the age of enlightenment, many people died understandable deaths. Such occurred among infants, parturient women, the elderly and the injured. Death among the very young and the very old was also common and was accepted. It did not take a Shaman to understand death following a fall from a high tree, or from a tiger attack, or an enemy arrow. Tigers, trees, water, enemies and other understandable hazards were part of the familiar environment and posed no mystery. Furthermore, the persons who ministered to the victims of injury: Bone setters and barber surgeons, generally held lower status than did the healers who ministered to the sick. This fatalistic view of injury maybe continues into present times.

Infant or maternal death, however, is no longer inevitable or acceptable, and we spend millions trying to prevent and treat cancer and heart disease, the killers of the elderly. We can now control most infectious diseases and we understand at least some of the risk factors that contribute to chronic disease.

The semantics of injury and accident

We are caught in a semantic trap. By definition accidents are unavoidable. If instead of accident we use terms like crash or fall to describe the energy transferring event, and the term injury to describe the damage done to the victim, then we can begin to think about how to prevent both the event and the damage it causes. We may not be able to prevent all car crashes, but we can make cars more crashworthy and thus prevent injury.

Injury as a rare event

Despite evidence to the contrary, accidental injury is widely perceived to be rare and unpredictable. This attitude is most likely to flourish in rural and isolated places. However, in the first four months of 1988, over 30 people have died in this State in motor vehicle crashes. Many more have been non-fatally injured. These are not rare events. Further, these events occur most frequently at certain times and in certain places and among certain kinds of people. They are not random. They can be predicted as to person, place and time, as can any other cause of death, and once the patterns are known, preventive actions could be taken. In fact, it is because auto crashes are so predictable that roads have been made safer and cars have been made more crashworthy than they were in the past. Much more can be done, however, if not to prevent crashes, then at least to prevent injury and death caused by crashes[6]. The technology already exists, e.g. speed limits, air bags, etc. We don't use them because they are expensive and because they interfere with individual rights, we say. So do vaccines and fluoridated water, interfere.

The conflict

Public health is concerned with the health and well-being of populations. Its origins stem from an attempt to control infectious disease. Its approach is societal and environmental, not individual. It can be coercive, it can apply legal sanctions. At the same time, the common good can come into conflict with individual rights. There is precedence that the common good should prevail, e.g. Jacobson v. Massachusetts[7]. However, in many situations, powerful special interest groups have been successful in lobbying for legislation to protect their interests, at the expense of that of the public[8,9,10].

Preventive medicine deals with persons on an individual basis. It attempts to change a person's behavior in such a way as to reduce risk factors for chronic disease. It holds the individual and not society responsible for his ills.

Both public health and preventive medicine approaches are used to reduce human misery. The philosophical dilemma here is whether we should blame the injury victim, or make the world safer for imperfect people? We could control a lot of enteric disease by asking people to boil their drinking water. That option for most people is impractical; instead, at great cost, "developed" societies provide safe drinking water for their people.

Public health's approach to injury should be aimed towards the control of a hazardous environment. This can be done through legislation and by engineering. Preventive medicine, on the other hand, aims to modify risky behavior through education and persuasion.

Injury's impact

For all living creatures, death is a certainty and is most likely to occur at a certain time. All species have a characteristic life span and all have a characteristic age-specific mortality curve. Life spans vary greatly by species, but the shape of the age-specific mortality curves is remarkably similar. In every species, the risk of death is highest around the time of birth and again near the end of the life span. The risk of an individual dying in the interval between these two stages of life is low, and for humans it becomes even lower as medical advances take place.

Many pre-literate human societies have recognized this fact and have institutionalized it in their naming and mourning customs. For example, when an infant was born it was not named right away, for to do so would acknowledge its instant humanity and its membership in the group. Instead, an interval of several weeks or possibly months had passed before it was named. If the infant died prior to naming, no big fuss was made, and frequently there was no funeral. Babies did die. They were easily replaced.

Even now, when an old person dies, people are sorry. If the person was important, a funeral will be held, but institutionalized mourning by the community will frequently be attenuated. Old people die, and this is acceptable.

On the other hand, if a young adult dies, and particularly if that person is male, then not only will there be an elaborate funeral, but institutionalized community mourning is the custom, and for a prolonged period of time. Young adults do not die often; their deaths threaten the very fabric of society. A tremendous investment has been made in rearing them and this investment cannot then be repaid. These are often the people who make society function. They provide food, they provide shelter, they provide government, they provide defense. Their loss is a terrible tragedy.

In the Western world, until quite recently, these patterns of mortality were recognized and the deaths of the very young and the very old were considered to be unavoidable. The death of a young adult was a tragedy, but such deaths were more common than they are today.

Many of the causes of these premature deaths, such as infectious disease and occupational mishaps, have now been brought under control. The shape of the age-specific mortality curve among humans in the Western world at the end of the 20th century approximates a broad based J. Deaths due to disease occur mostly under one year of age and over age 45. Those that occur in between are largely caused by injury.

The impact of various causes of death can be measured in a number of ways. We can calculate death rates by disease. We can

calculate age-specific death rates by cause. We can summarize these rates to obtain the 10 leading causes of death. More recently the Centers for Disease Control (CDC) have devised a new parameter: The cost of a death. This measure is called Years of Potential Life Lost (YPPL) and is derived by subtracting the age at death, if below 65, from 65. A person who dies at age 65 has lost 0 years of potential life, while one who dies at age 20 has a YPPL of 45, e.g. because injury mainly affects the young it is the leading cause of YPPL. We can substitute the term "productive" in order to appreciate fully the impact of injury on our society.

Men are more valuable than women

There is not a culture in the world, either currently or historically, that does not value men more than women. This is manifest in the universal preference for male children, in the better food, clothing, and education given to male children. Men engage in public life, they are heroes, or politicians, or warriors. Women are delegated to staying home and doing menial tasks. Even today, when women work outside the home, they do less important jobs and receive less pay. In spite of what the feminists say or do, when women come to dominate a field of endeavor, that whole field is denigrated, such as teachers, nurses and secretaries. The United States is no exception.

Yet, when it comes to injury, we act as if our young men are superfluous. Perhaps they are now. There are 105 males born for every 100 females. Males are more susceptible to death from infectious disease than are females, although we have virtually eliminated childhood infectious diseases. Males are also more likely to sustain injury, and die as a result, at every age. Nevertheless, there are more males in the population than there are females up until age 25. Perhaps we recognize this excess and therefore tolerate their loss.

Spare parts

Doctors perceive their role to be that of preserving life. They rarely perceive their role to be preventing illness. Prevention is what public health workers see as their role. Prevention means keeping the agent or disease away from the host, or of strengthening the host's defense mechanisms. In the instance of infectious diseases, this has meant pure water, sanitation and vaccines. Vaccines and antibiotics have a certain amount of glamour. Water supply and sanitation do not.

Prevention of chronic disease often involves separating the host from the risk factor. This can be done by removing risk factors from the environment or by convincing people to avoid contact with existing risk factors. Only government regulation can remove risk factors from the environment. But government is highly influenced by economic lobbies that stand to lose assets if regulated. Government is often reluctant to regulate. The tobacco industry is even subsidized, while people are told to refrain from consuming tobacco.

Chronic disease is being treated with drugs and surgery. Drugs may produce dramatic results, but surgery is pure drama. Recently, surgery is used to replace damaged parts. Many of these spare parts come from trauma victims. The media informs us of the growing number of people lying on their death beds, desperately waiting for a needed transplant organ to become available.

If injury is always caused by an accident, and if accident is an act of God, then nothing can be done about it and we will continue to swap new lives for old. But if, as epidemiological studies indicate, injuries are patterned, and therefore predictable and preventable, then our chronic disease sufferers and their surgeons may have to look elsewhere for spare parts.

Why no action?

Two recent articles have addressed the issue of lack of action in the prevention of injury. In an extremely interesting work, Linder notes that the four professions--medicine, public health, law and economics--have very different causal frameworks, each of which constrains the nature of preventive interventions[11]. When these intraprofessional disagreements are coupled with a lack of political cogency, action is likely to be uncoordinated and transient. Linder argues that strong premises provide a firm foundation for inference, but such premises also function as barriers to integration and the formation of a public consensus as to how to prevent injuries.

Waller, on the other hand, in a rather rambling article, discusses conceptual shifts that have occurred during the past 40 years, from manifestational to etiologic definition for injury as a health problem, i.e., this conceptual shift in the area of infectious disease has led to concerted action. In the area of injury, this has not yet occurred. Waller laments the fragmented injury data base as well as the lack of a centralized agency to deal with the problem.

Conclusion

More than a conceptual shift in thinking about the etiology of injury is necessary for public action to prevent as well as to approach the problem of injury rationally. The recent establishment of an injury control center within the CDC is a step in the right direction. What needs to be done is to evaluate the societal cost of injury and to make the results available to the public. Given all the other demographic changes that have occurred in this century, can we afford to tolerate this carnage? Can we afford to lose our young men?

REFERENCES

1. Committee on trauma research. National Research Council. *Injury in America, a Continuing Public Health Problem.* 1985 Washington DC: National Academy Press.
2. Teall E: (Ed) *New Concise Webster's Dictionary.* 1984 New York, N.Y. Modern Publishing.
3. Gibson JJ: Contribution of experimental psychology to the formulation of the problem of safety: A brief for basic research. In *Behavioral Approaches to Accident Research.* 1967 pp 77-89 New York: Association for the Aid of Crippled Children.
4. Baker SP, O'Neill B, Karpf RS: *The Injury Fact Book.* 1984 Lexington, Mass: Lexington Books.
5. Davis HF, Schletty AV, Ing R, Wiesner PJ: The 1990 objectives for the nation for injury prevention: a progress review. *Public Health Reports,* 1984, 99:10-22.
6. Daffner RH, Deeb ZL, Lupetin AR, Rothfus, WE: Patterns of high-speed impact injuries in motor vehicle occupants. *The Journal of Trauma,* 1988, 28:498-501.
7. Jacobson v Massachusetts, 197 U.S. 11 (1904).
8. Baker SP: On lobbies, liberty, and the public good. (editorial) *Am J of Public Health.* 1980, 70:573-574.
9. Perkins RJ: Perspective on the public good. *Am J of Public Health,* 1981, 71:294-295.
10. Baker SP and Teret SP: Freedom and protection: a balancing of interests. *Am J of Public Health,* 1981, 71:295-296.
11. Linder SH: On cogency, professional bias, and public policy: an assessment of four views of the injury problem. *The Milbank Quarterly,* 1987, 65:276-301.
12. Waller JA: Injury: conceptual shifts and preventive implications. *Ann Rev of Public Health,* 1987, 8:21-49.

The new woman physician: Her growing numbers are not yet represented in organized medicine

from the American Medical Association

Today's woman physician is about age 35, involved with patient care, and is based in an office and not at a hospital. Her professional type can be found in great numbers in New York, California and Illinois.

When she chooses a specialty, she no longer finds herself limited to treating women and children. She has begun to enter formerly male-dominated fields, such as surgery, in ever-increasing numbers. However, her strength is still not proportionately represented in the professional forum where she can do the most for her future, and the future of other women who wish to become physicians: organized medicine.

What do the numbers actually show and what do they portend for medical organizations?

Data tell the story

There are more doctors in America now than in the 50s. Though the numbers of total physicians per 100,000 population varied little between 1950 and 1960, there were over 60% more physicians per 100,000 total population in 1985 than in 1960.

Women in medicine have kept pace with this trend. Between 1970 and 1985, while the total number of practicing physicians grew by 66%, the number of women physicians increased by more than three times that amount, to over 80,000. Women were 12% of the physician work force in 1980; by year-end 1985, they accounted for 15% of the total physician population.

Women physicians, as a group, are young: by the end of 1985, 42% were under 35. Only 7% were 65 or older. In fact, nearly one-third of office-based women were under 35 compared to 14% of office-based male physicians in this same age group.

Practice patterns change

What specialties attract women physicians? Though the rankings have changed since the late 60s, seven of the specialties having the most women across all age categories have remained the same: pediatrics (it had the highest count of women in 1967: 3,519), general practice, psychiatry, internal medicine (it had the most women physicians in the period 1980-1985--going from 8,130 to 14,716), anesthesiology, obstetrics/gynecology and pathology. Although there was a 63% increase in the numbers of women in the hospital-based specialties between 1967 and 1985 (anesthesiology, pathology and radiology), nearly four in five women physicians were in patient care, the majority of those office based.

In terms of age and specialty, growth has been interesting. There are more women now in internal medicine, general surgery and family practice *under age 35* than women that age in those specialties in the late 50s and early 60s. Among surgeons, 70% of the women are under age 35 compared to 3% aged 55 to 64, and 1% who are 65 or older. As a comparison, men are more evenly distributed than women by age and specialty, except for general practice. There are actually more male physicians 55 and older in that specialty (over 67%) than those under age 35 (only 3%). Eight years ago, more than a third of the specialties had no women in training; in 1985, female residents could be found in all but vascular surgery.

Membership is still low

Unfortunately for organized medicine and for women, they still are not as actively involved as men. Only 28% of active women physicians are members compared to 45% of male physicians, though this figure represents an increase over previous years.

As of the 1985-1986 school year, 21,624 women were enrolled in medical school, or about one third of all medical students. It is interesting to note that 36% of those women students are AMA members compared to 40 percent of the male medical students.

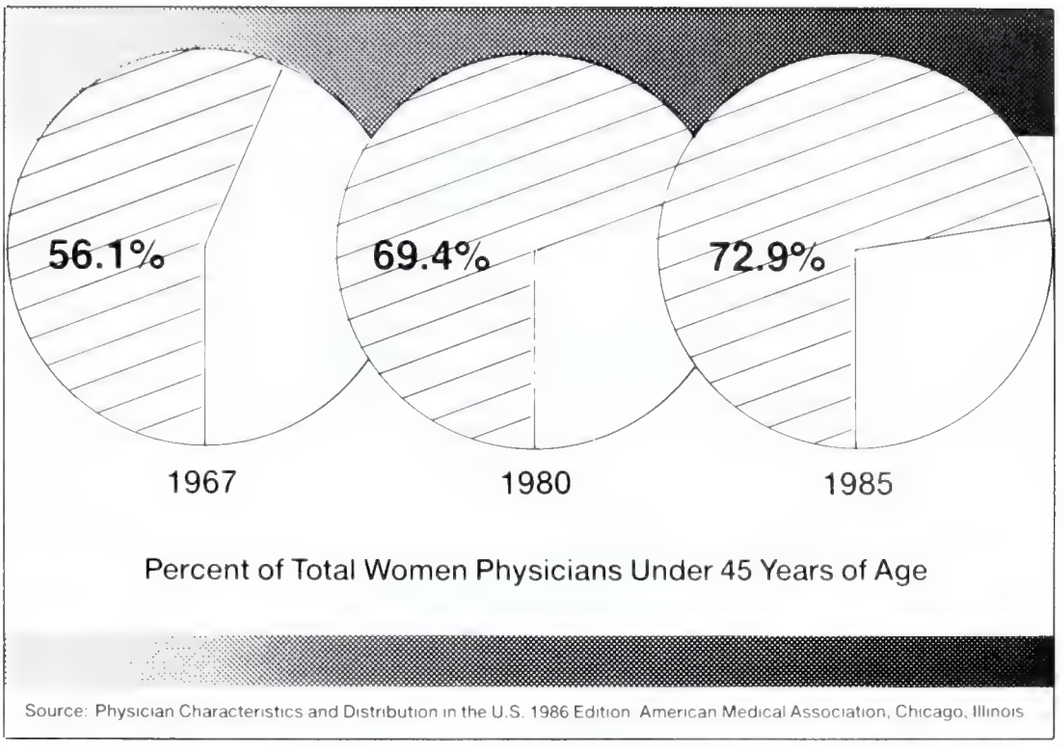
Such figures provide a strong base for more participation by women in organized medicine.

The AMA established the Women in Medicine Project in 1984 to promote such involvement. The Project coordinates AMA initiatives addressing women physicians and medical students, including membership development, leadership train-

All statistics have been taken from ***Physician Characteristics and Distribution in the U.S.****, 1986 edition, Department of Data Release Services, American Medical Association. Percentages may not add up to 100% due to rounding.*

ing and joint activities with special sections of the AMA. It also serves as a resource and clearinghouse for information on women in medicine.

The Project is guided by a seven-member physician and medical student Advisory Panel. They are working to ensure that women physicians and medical students are "fully mainstreamed" into organized medicine. Fully mainstreamed means when the proportion of women joining the AMA matches the proportion of men who become AMA members, and when the number of women in leadership positions is proportional to their numbers in the AMA.



Source: Physician Characteristics and Distribution in the U.S. 1986 Edition American Medical Association, Chicago, Illinois

AMA Women in Medicine Project promotes involvement

To do this, the Project has embarked on several membership initiatives, including a nationwide phone-a-thon to invite women physicians to join the AMA. A short videotape of the event has been produced. It provides insights about the recruitment process and is available to medical societies. The Project also has developed and tested a model survey on the attitudes of women physicians, both members and non-members, toward their state or county medical society. This instrument enables societies to evaluate how effective their services are as perceived by women physicians in their communities.

The AMA Women Leaders Databank, maintained by the Project, now has more than 800 names of women nationwide who are interested in participating in federation activities. The Databank was used to recommend candidates for AMA medical education committees and American specialty boards. Medical societies can use the Databank to great advantage to tap more women for leadership positions, creating more visibility for them and encouraging them to be role models for other women not actively involved in their organizations.

The AMA Women in Medicine Project has also commissioned several publications and resource documents. The first of these is the often requested "Maternity Leave for Residents," a comprehensive study of maternity leave policies that includes recommendations and guidelines. Also popular is "In the Marketplace" that covers the practice characteristics, work patterns and incomes of women physicians. Plans call for the publication of a new edition that will include revised data.

"The Residency Interview: A Guide for Medical Students," published in the fall of 1986, addresses the concerns of all fourth-year medical students, especially women, involved in the residency training program interviewing process. All fourth-year female medical student AMA members were sent a copy for their review and comment. Several hundred have responded. The "Guide" is currently being market tested and is also a membership incentive for all third- and fourth-year medical students.

The Project is still young, like the majority of women physicians, and needs the active support of state, county and specialty societies around the country to enhance the involvement of women at the local and national level. The ranks of women in medicine are growing. Organized medicine has much to gain from mainstreaming women members. It also has a lot to lose if their opinions are not represented in local and national deliberations on the future of medical training and practice in this country.

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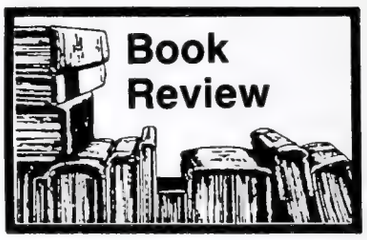
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Novel explores pediatric residency

Pediatric Ward, John Briley Jr., MD, Ashley Books Inc., 1986

Pediatric Ward is a novel that explores the realistic side of pediatric residency in a busy city hospital, but from a point of view not usually understood by the average house officer. It emphasizes the pleasures, pathos, and pressure (physical, mental and emotional) of this period of training. It even goes beyond this by exploring one reaction to a physical handicap.

This young, handicapped physician, by making light of his handicap in the eyes of his little patients and by neglecting his own physical limitations, not only effectively denies his handicap but almost brings his career to a tragic end.

Pediatric Ward is written as a series of vignettes and short stories tied together by a common setting and group of participants. The author's style tends to be somewhat flowery, but not offensively so. At times the progress of the story becomes tedious as he attempts, in detail, to explain medical terms and conditions. However, these times are limited and should not discourage the reader from completing the story and its message.

Although this book is labeled a "novel," anyone personally acquainted with Briley, a pediatrician on Maui, can readily recognize it as being strongly autobiographical.

I would recommend this novel as entertaining reading for both physician and layman. For the physician, it brings back memories; for the layman, it gives insight into the making of a physician.

Marion Hanlon, MD, MPH



Over the Editor's Desk

STEPHEN R.P.K. BRADY, MD

RECORD NUMBER OF HOSPITAL CLOSINGS—Seventy-nine U.S. community hospitals closed last year, the highest number of hospital closings ever recorded. Hospitals in 30 states closed their doors, evenly split between urban and rural locations.

Carol McCarthy, president of the American Hospital Association, said the unstable economic environment with which the nation's hospitals must cope contributed to the closings.

"In the past year, nearly seven in 10 rural hospitals in this country lost money caring for patients," she noted, "and 50 percent of urban hospitals operated in the red." McCarthy observed that in addition to losing access to critical hospital care, the community also loses a significant employer when a hospital closes.

Hospitals that close generally have experienced several consecutive years of near break-even or deficit patient care operations. These losses are reflected in a hospital's patient operating margin, which is the difference between revenue and expenses.

McCarthy cited inadequate Medicare payments as a likely contributing factor in hospital closings. Medicare patients account for nearly 40 percent of hospital revenue.

"Inadequate Medicare payments to hospitals is a serious problem," McCarthy said. "Hospitals saw the price of goods and services they purchase rise 32 percent between 1984 and 1988 while Medicare raised the prices it pays hospitals to care for beneficiaries only 11 percent."

Of the 79 community hospitals that closed in 1987, 39 were located in urban areas, 40 in rural areas. Some 35 were for-profit hospitals, 30 were not-for-profit facilities, and 14 were government owned and operated. Hospitals that closed most frequently operated between 25 and 99 beds.

In addition to the 79 community hospitals that closed, 17 non-community specialty facilities in 13 states closed in 1987.

The AHA, a not-for-profit organization serves as a national advocate for hospitals and the patients they serve, provides education and information for its members, and informs the public about hospitals and health-care issues. These hospitals generally provide care of a rehabilitative or long-term nature.

STANDARDS TO REDUCE RISK TO HOSPITAL PATIENTS—The Joint Commission of Accreditation of Healthcare Organizations has adopted new standards that require hospital medical staffs to participate in the clinical aspects of risk management activities. In addition, physicians seeking medical staff membership or renewal of clinical privileges are required to disclose any disciplinary actions that may have been taken against them, as well as any adverse judgments or settlements in medical malpractice actions.

The prevention-oriented standards, which become effective Jan. 1, 1989, require medical staffs to become involved in:

- Developing criteria for identifying specific cases with potential risk in clinical aspects of care.
- Correcting problems in clinical care uncovered by risk management activities.
- Designing programs to reduce risk in the clinical areas of patient care and safety.

The new standards call for a flow of information from the risk management to the quality assurance function in a hospital and for governing body support of risk management activities relating to patient care and safety.

Information to be provided in physicians' applications for staff membership or clinical privileges must include pending challenges to and/or loss of any licensure or registration, as well as voluntary or involuntary termination of medical staff membership or loss of reduction of privileges at another hospital. Reporting adverse final judgments or settlements in malpractice actions to the hospi-

(Continued)

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tal is a minimum requirement. Any additional requirements for disclosure of further information regarding a practitioner's involvement in litigation must be specified in the hospital's medical staff bylaws.

The Joint Commission is considering similar standards for nursing homes, mental health centers, home-care organizations, ambulatory-care organizations and hospices.

SPECIAL PUBLICATION TO ADDRESS IMPAIRED PRACTITIONERS—A special April issue of the *Quality Review Bulletin (QRB)* explored solutions to the growing problem of impaired physicians, nurses, and pharmacists, and mental health professionals. *QRB* is the preferred monthly journal of quality assurance, published by the Joint Commission on Accreditation of Healthcare Organizations. The April issue featured practical expertise of prominent authorities on dealing with impairment, and offers practitioners, managers, and quality assurance professionals an inside view into intervention models, treatment programs, follow-up care methods, and risk management issues.

"Practitioner impairment presents a true threat to the health professions and to the well-being of patients in this country," said William Jessee, MD, Joint Commission vice president for education. "This special-focus *QRB* heightens health-care providers' awareness of these problems and gives helpful information to the many impaired practitioner programs that now assist professionals suffering from substance abuse and mental illness."

ANTI-ANXIETY AGENT SHOWN EFFECTIVE FOR DEPRESSION; TWO NEW STUDIES REACH SIMILAR CONCLUSION—Recent studies add to a body of evidence that the anti-anxiety medication alprazolam (Xanax, Upjohn) is also effective for treating moderately severe depression.

Karl Rickels, MD, professor of psychiatry and pharmacology, and colleagues in the Department of Psychiatry at the University of Pennsylvania treated 241 outpatients with moderately severe depression, who were randomly divided into four groups. Each group was assigned one of four preparations in identical-looking capsules: Alprazolam; an antidepressant of the tricyclic type called imipramine hydrochloride; another anti-

anxiety agent, diazepam (Valium, Roche); or placebo (an inactive substance).

After six weeks of treatment, imipramine and alprazolam proved equally effective, and significantly more effective than diazepam or placebo, in improving depressive symptoms. Imipramine-treated patients, however, reported the greatest number of adverse side effects.

Another double-bind study, conducted by Jan Fawcett, MD, and colleagues of the Department of Psychiatry at Rush-Presbyterian-St. Luke's Medical Center, Chicago, treated outpatients with major depressive disorder, using either alprazolam, the tricyclic antidepressant desipramine or a combination of alprazolam and desipramine. For those who remained in treatment for six weeks, similar improvement of depression was achieved by all three groups.

In some cases, significant improvement was seen in the first week. The depression as well as anxiety improved sooner in individuals treated with alprazolam. These studies and others suggest that, in addition to alprazolam's present indication as treatment for anxiety and for anxiety associated with depression, the medication may have value as treatment for depression.

"Alprazolam, Diazepam, Imipramine, and Placebo in Outpatients with Major Depression," Karl Rickels, MD, et al, Department of Psychiatry, University of Pennsylvania, Philadelphia, Archives of General Psychiatry, Vol. 44, October 1987, pp. 862-866. "Alprazolam: An Antidepressant? Alprazolam, Desipramine, and an Alprazolam-Desipramine Combination in the Treatment of Adult Depressed Outpatients," Jan

(Continued on page 451)

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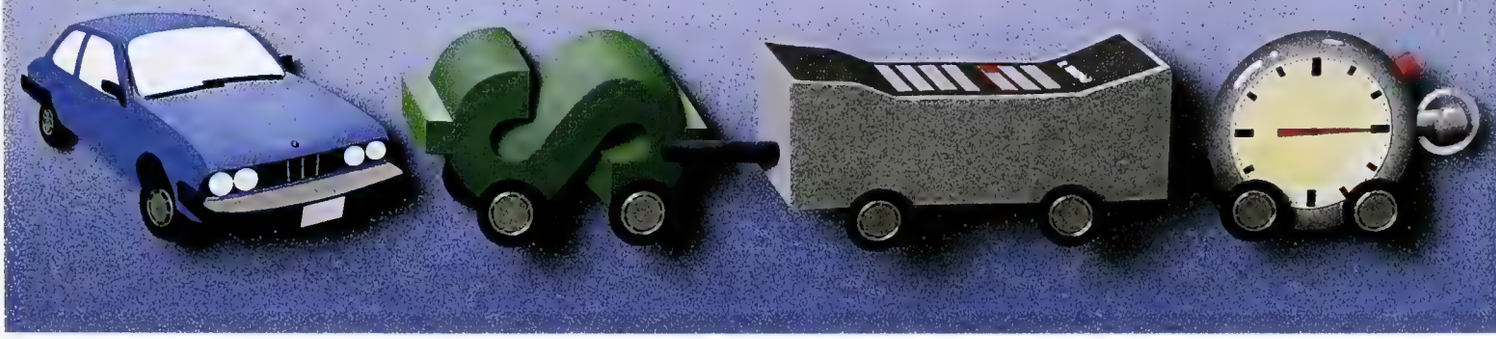
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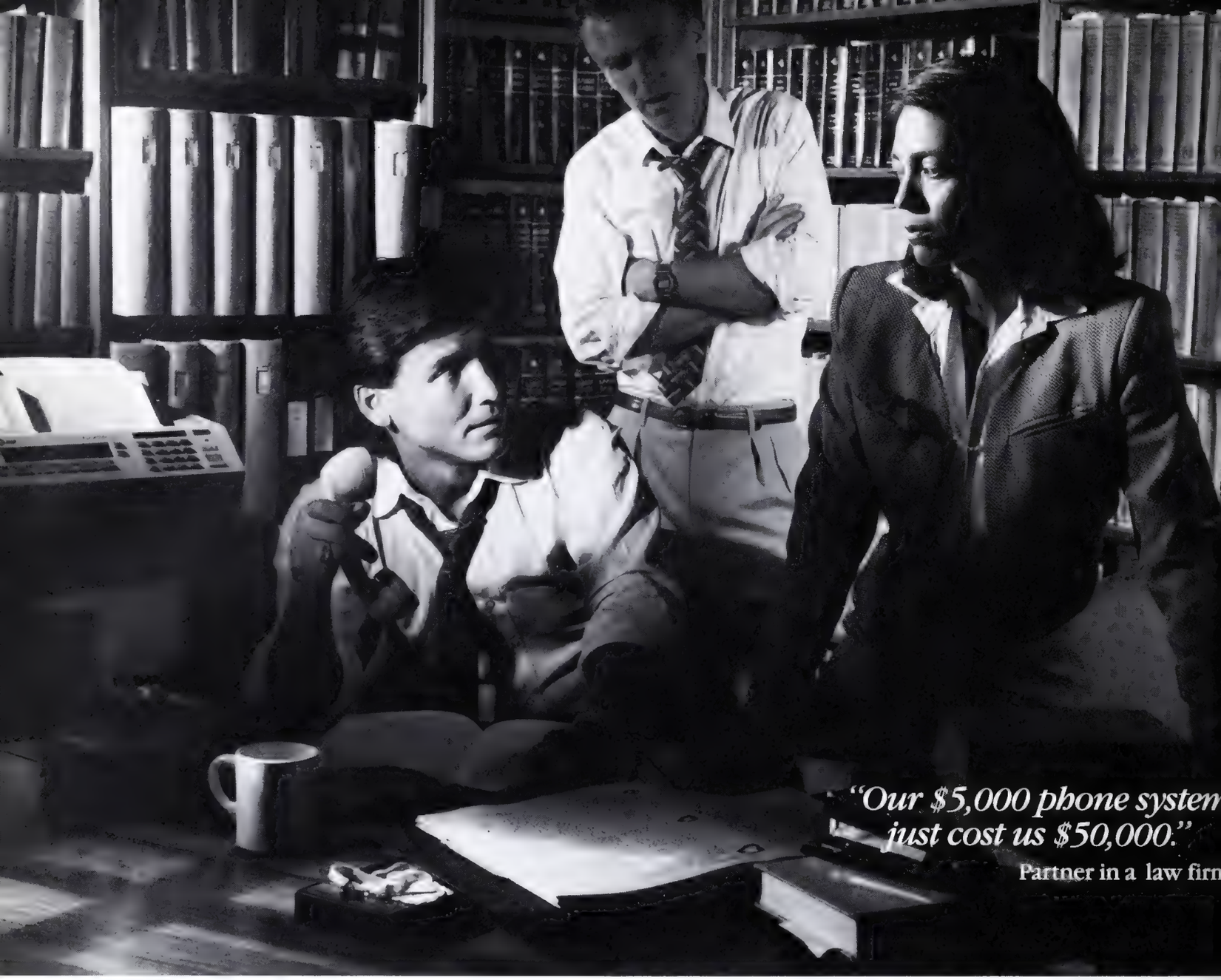
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OTED *(Continued from page 449)*

Fawcett, MD, et al, Department of Psychiatry, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Journal of Clinical Psychopharmacology, Vol. 7:5, October 1987, pp. 295-310.

BRIEF, UNCONTROLLABLE NOISE STRESS PROVOKES SUSTAINED NERVOUS SYSTEM, HORMONAL AND MOOD CHANGES—Healthy individuals exposed briefly to loud noises that they cannot silence undergo stress reactions that last long after the sound stops, a finding that may have implications for understanding a cause of depression, according to researchers from the National Institute of Mental Health. Lack of control over the disagreeable stimulus appears to be more central to causing the stress than is the magnitude of the assault.

Laboratory animal studies have established that extreme passivity and prolonged neurochemical changes follow exposure to aversive stimuli that the creatures cannot alter, but do not follow disturbing stimuli that they can affect. Similarly, depression in humans and specific changes in hypothalamic-pituitary-adrenal hormones tend to follow negative life events that people feel unable to influence. Examples of such events include the death of a loved one, loss of a job or disintegration of a marriage.

The researchers sought to determine if even mild discomfort that a person cannot control will cause related negative psychological and emotional reactions that exceed those triggered by a controllable event.

Ten healthy volunteers with no family or personal history of mental illness were exposed to a series of bothersomely loud tones. On alternate days, subjects could cut short the tones by learning a simple sequence of buttons to press. On the other days, the noise could not be stopped and each burst lasted for five seconds.

After 30 minutes of intermittent exposure to the noise, subjects were given anagram-solving tasks to see if performance would be affected. Heart rate, skin temperature and other physical variables were measured, and blood samples were taken throughout the procedure via intravenous catheters. Questionnaires assessed people's feelings after the procedure.

On days when individuals could not control the noise, they reported more feelings of helplessness, tension, stress, unhappiness, anxiety and depression than when they could control the sound.

(Continued on page 454)

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OTED—*(Continued from page 451)*

There was also increased secretion of the adrenal hormones associated with stress reactions, lasting for 45 minutes after the stimuli stopped. Anagram-solving skills were not affected. Thus, the authors find that lack of control over even a mildly unpleasant stimulus can produce changes in mood as well as in neuroendocrine and autonomic nervous system functioning.

"Controllable and Uncontrollable Stress in Humans: Alterations in Mood and Neuroendocrine and Psychophysiological Function," Alan Breier, MD, et al., Section on Clinical Studies, Clinical Neuroscience Branch, National Institute of Mental Health, Bethesda, Md., American Journal of Psychiatry, Vol. 144:11, November 1987, pp. 1419-1425.

SWEET TREATS LULL CHILDREN INTO SURGERY—Candy is dandy, according to pediatric surgery patients at the University of Utah Medical Center, Salt Lake City. Not just candy, but special lollipops containing fentanyl, a drug that helps relax young patients prior to surgery. Children suck on the lollipops while being held by their parents. When it's time for them to leave for the operating room, they are relaxed enough to be separated from their parents without the expected crying and anxiety. Although not yet approved by the Food and Drug Administration (FDA), the lollipops are being tested at several hospitals.

Sedating children with nose drops is another technique being used successfully to dispel children's fears about surgery. Researchers at Chicago's Cook County Hospital have developed nose drops made from ketamine, an FDA-approved drug that replaces feelings of anxiety with those of detachment. It causes fewer cardiac and respiratory problems, works within minutes, and wears off quickly with no residual effects, according to anesthesiologist Antonio Aldrete. In addition to greatly reducing preoperative stress, children using both the lollipops and nose drops needed less postoperative pain medication.

Aldrete also uses the nose drops to relax anxious adult patients. The drops have proven especially helpful for burn victims prior to painful dressing changes for rehab sessions. Anesthesiologists at the Unversity of California Medical Center at San Francisco have developed another type of preoperative nose drops using sufentanil, a synthetic opiate. The nose drops are becoming more popular as news about them spreads.

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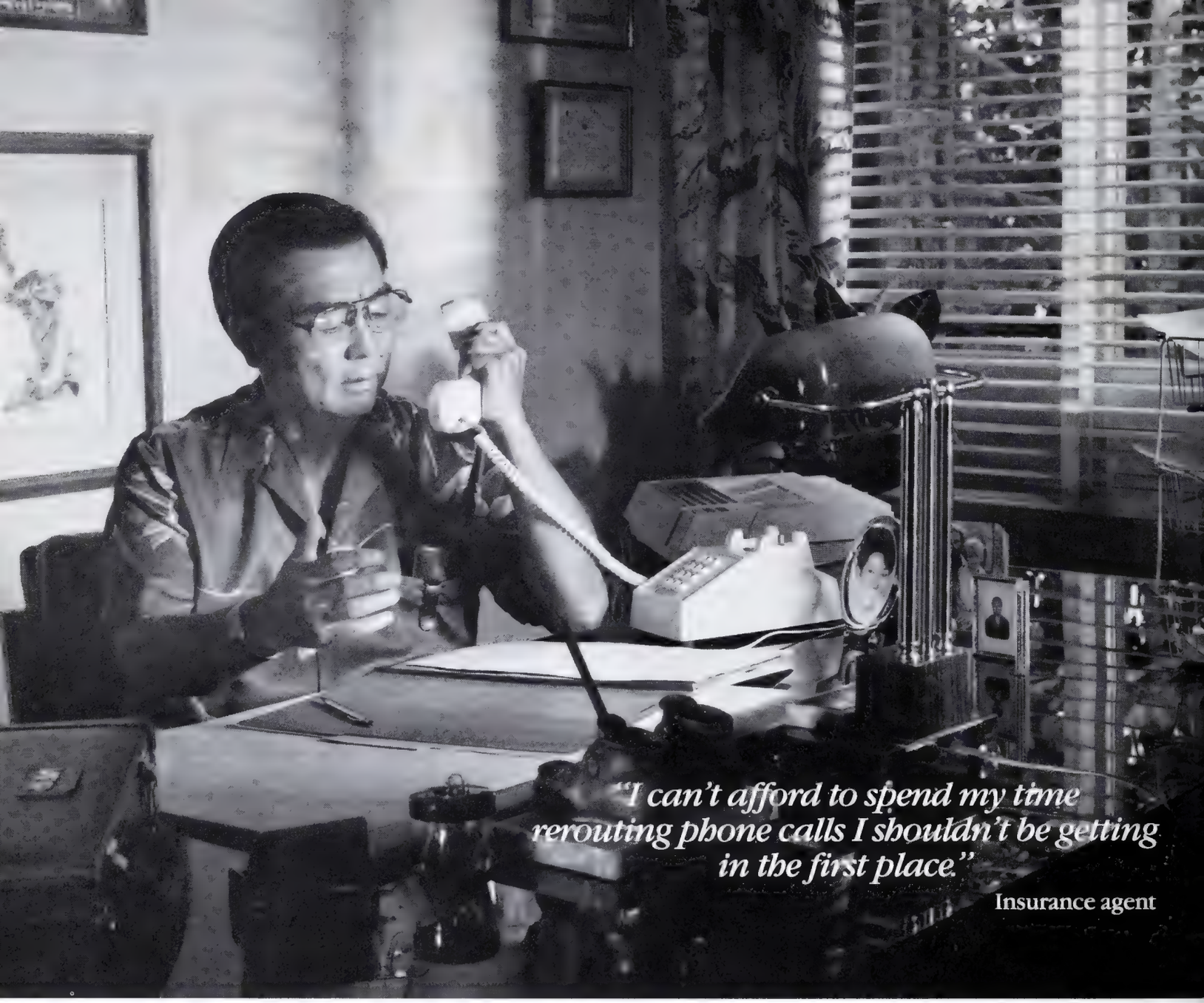
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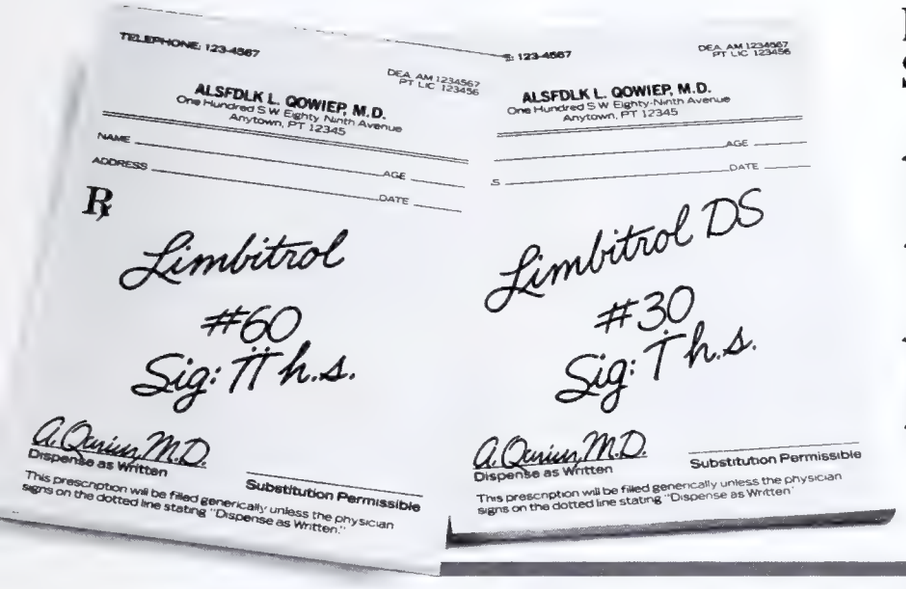
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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

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Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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In the depressed and anxious patient

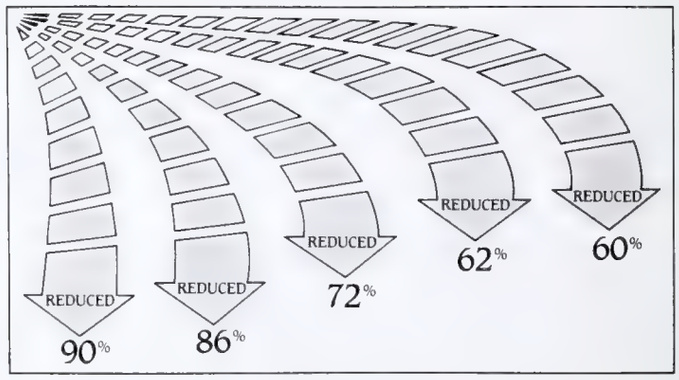
See Improvement In The First Week...[1]

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

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Ciguatera poisoning in the Pacific

Much has been written about the medical aspects of Ciguatera poisoning. The subject is quite pertinent to Hawaii, with its large fish-catching and fish-eating population. Readers might be quite interested in the source of this food poison. We, therefore, take the liberty of reprinting what we submitted after attending the Asian-Pacific Regional IPPNW Symposium in Auckland, New Zealand, in February 1987.

Mururoa is a "C"-shaped atoll and lagoon situated some 150 miles southeast of Tahiti, which is in the French archipelago of the Tuamotos. France has exploded more than 90 thermonuclear bombs at Mururoa to date.

Dr. Tilman Ruff is a Melbourne physician, active in the Medical Association for the Prevention of Nuclear War (MAPNW), the Australian affiliate of IPPNW; he has had a particular interest in the effects of nuclear testing in Mururoa and the resultant increase in fish poisoning of humans.

Ciguatera toxicus is a plankton organism that results when the coral polyps die, either naturally or because of man's destructive efforts. It is a worldwide affliction of humans who eat fish and its habitat is between 30 degrees north and south latitudes. Reef fish subsist on plankton and are eaten by larger fish, which are unaffected, but it goes up the food chain to the point where ocean-caught large fish may be distributed to markets far removed from the source. It affects the gastrointestinal tract of humans and is neuromuscularly toxic. It may, but rarely cause death. It can cause an acute affliction or a chronic disabling malady. Its presence also has the effect of changing the Pacific island peoples' diets for the worse. The highest incidence now is in French Polynesia. Hao Island is a French staging area for nuclear bomb testing and where previously Ciguatera was unknown, its incidence has risen sharply to as much as 43%. In Mangareva, the presence of *C.toxicus* has gone up to 56%. In the Marshall Islands, consequent to U.S. nuclear testing, the former incidence of 9.3% has doubled and tripled.

It is well-known that human intervention destructive of coral is the major cause. In northern Australia it was the mining of bauxite to make aluminum that did it. Although direct proof is lacking, it was the ingress of the large French army to French Polynesia to bulldoze airfields, harbors, etc. in preparation for testing that caused the rise in incidence. On July 25, 1979, an explosion down a 1,000 m shaft in Mururoa caused disruption of a million cubic feet of coral and a tidal wave that hit the Tuamotos. The French contention that all the radioactive material will remain absorbed by the basalt layer has been challenged. Ruff et al stated unequivocally that it will *all* be leached out ultimately or permanently poison the atoll.

J.I. Frederick Reppun, MD
Editor

The Board of Health

The State Department of Health's *Hawaii Health Messenger,* Vol. 51, No. 2, Summer 1988, has an excellent leading article describing the Board of Health. If it is the work of editor Charlene Young, MPH, we congratulate her for a very readable, clear account of an institution established 138 years ago by King Kamehameha III. This antedates the Hawaii Medical Association by six years.

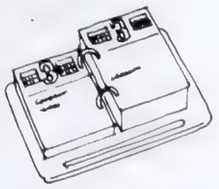
Of particular interest to us practicing physicians is the revelation that under the overall direction of Jack Lewin, MD (please note the emphasis on the suffix MD!), and the chairmanship of Ralph Beddow, an internist at the Straub Clinic, the Board is no longer a "rubber stamp" group, but an "active" body of representatives from all the geographic divisions of the Hawaiian Islands. The members have been fired up to participate in bringing about better health for the people of *Hawaii nei.*

We have also noted that the Department of Education and its Board of Education are on a parallel course. Former senator Charles Toguchi is the Department's director. It is becoming obvious that the DOH and the DOE work well together. The man-in-charge — whose desk is where "the buck stops here" — is Gov. John Waihee.

We congratulate the governor, Jack Lewin and Charlie Toguchi for progress shown to date.

J.I. Frederick Reppun, MD
Editor

(Continued on page 489)



Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS

ONGOING

For a complete list of ongoing programs, please refer to the September 1988 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

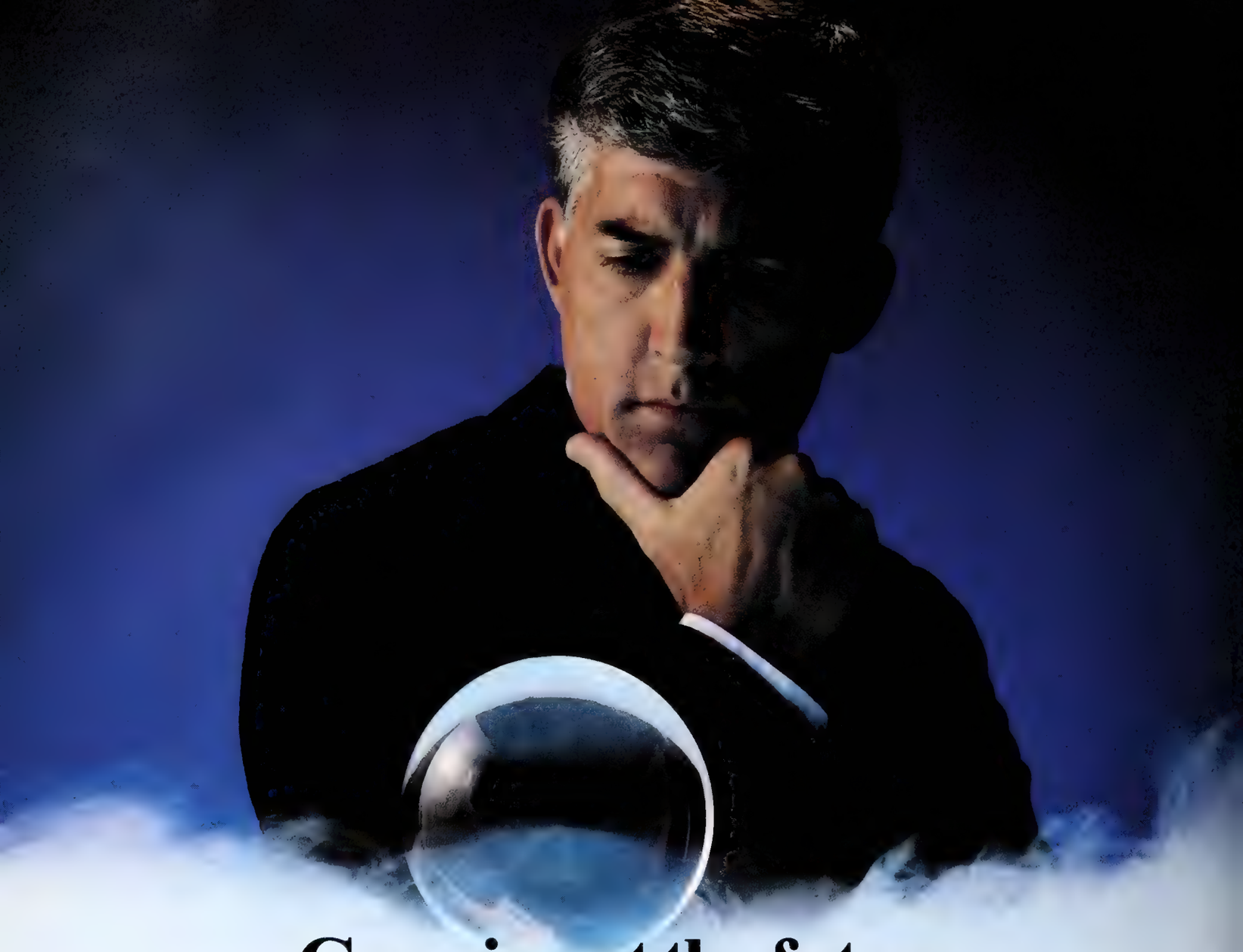
SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Oct. 12-14, 1988	Hip and Knee Reconstruction Surgery 1988, USC Postgraduate Division, University of Southern California School of Medicine, 1975 Zonal Ave., KAM314, Los Angeles 90033, 213-224-7051. Location: Sheraton Princeville Hotel, Kauai.
Oct. 14-16, 1988	Hawaii Medical Association 132nd Annual Scientific Meeting, Hawaii Medical Association. Contact: HMA, 1360 S. Beretania St., Honolulu, HI 96814, 808-536-7702. Location: Kona Surf Resort, Big Island.
Oct. 15-20, 1988	Western Orthopaedic Association, Exec. Dir. H.J. Martin, 2975 Treat Blvd., D-4, Concord, CA 94518, 415-671-2164. Location: Hilton Hawaiian Village, Honolulu.
Oct. 16-21, 1988	Hawaiian Seminar on Clinical Anesthesia, California Society of Anesthesiologists, 1065 E. Hilldale Blvd., Suite 410, Foster City 94404, 415-345-3020. Location: Westin Maui Hotel, Maui.
Oct. 21-23, 1988	Computer Assisted Medical Lit Search, Kauai Medical Group, 808-245-1807. Location: Kauai Westin.
Oct. 22-28, 1988	New Approaches to the Evaluation of Neoplastic Lymphoproliferative Disorders, University of Southern California, School of Medicine, Department of Pathology, 2025 Zonal Ave., Edmondson Building - 186, Los Angeles, CA 90033, 213-224-7121. Location: Wailea Beach Resort, Maui.
Nov. 2-19, 1988	Pacific Coast Obstetrical & Gynecological Society 55th Annual Meeting, Eastside Travel Service, 616 Bellevue Way N.E., Bellevue, WA 98004, 206-454-4055; 1-800-327-7731. Location: American Hawaii Cruise, S.S. Independence.
Nov. 14, 1988	AIDS: Practical Applications for Health Care Providers, National Institutes of Allergy & Infectious Diseases and Hawaii State Department of Health. Contact: Corinne Yazawa, B.Ed., HSDOH, Personnel Office — Training Section, P.O. Box 3378, Honolulu, HI 96801, 808-548-5970. Location: Hilton Hawaiian Village, Honolulu.
Nov. 14-16, 1988	The Second International Symposium on Man in the Sea, Department of Physiology, John A. Burns School of Medicine, 1960 East-West Road, Biomed T-608, Honolulu, HI 96822, 808-948-8827. Location: Maui.
Nov. 23, 1988	Hansen's Disease 1988, Hansen's Disease Community Program, State of Hawaii and co-sponsored by the Hawaii Medical Association. Contact: Richard I. Frankel, M.D., 3650 Maunalei Ave., Honolulu, HI 96816, 808-735-2472. Location: Halekulani Hotel, Honolulu.
Dec. 10-17, 1988	Critical Issues in Urology, Division of Urology, Stanford University School of Medicine. Contact: Symposia Medicus, 2815 Mitchell Dr., Suite 128, Walnut Creek, CA 94598-1622, 415-935-7889. Location: Sheraton Kauai, Kauai.
Dec. 24-30, 1988	Advances in Medicine, Symposium Maui, Inc., and co-sponsored by the Hawaii Medical Association. Contact: Paula Harrison, P.O. Box 10185, Lahaina, HI 96761, 808-879-8182. Location: Royal Lahaina Resort, Maui.
Oct. 22-29, 1988	13th Annual Pediatrics for the Practitioner: A Pediatric Symposium, Center for Health Education, P.O. Box 1428, Long Beach, CA 90801-1428. Location: The Westin Mauna Kea, Big Island.

The Hawaii Medical Association does not review or evaluate the programs listed in the Hawaii Medical Journal Continuing Medical Education column and assumes no responsibility for educational value, scientific content, changes in agenda or cancellations.

(Continued on page 467)



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Jan. 14-21, 1989	10th Annual Royal Hawaiian Eye Meeting, Hawaiian Eye Foundation, c/o Mary Charles & Associates, 2334 South King St., Suite 205, Honolulu, HI 96826, 808-942-9655. Location: Westin Kauai Convention Center.
Jan. 15-20, 1989	Hawaiian Seminar On Clinical Anesthesia, California Society of Anesthesiologists. Contact: CSA, 1065 E. Hillsdale Blvd., Ste. 410, Foster City, CA 94404, 415-345-3020. Location: Sheraton Kauai Hotel, Kauai.
Jan. 21-28, 1989	Orthopedic Emergencies, Scripps Memorial Hospital-Encinitas and The American Institute of Postgraduate Education. Contact: Edith S. Bookstein, AIPE, P.O. Box 3586, La Jolla, CA 92038, 619-454-3212. Location: Kona Surf Resort, Big Island.
Jan. 29-Feb. 3, 1989	Clinical Update in Anesthesiology, Tuscon Hospitals Medical Education Program. Contact: Murray G. Atnikov, MD, c/o Box F110-63, Blaine, WA 98230, 604-874-5291. Location: Stouffer's Wailea Beach Resort, Maui.
Feb. 6-10, 1989	Hawaii '89: 4th Annual Advances in Primary Care, Pacific Institute of Continuing Medical Education and co-sponsored by the Hawaii Medical Association. Contact: Mrs. Valerie Murray, P.O. Box 1059, Koloa, HI 96756, 808-742-7471. Location: Waiohai Resort, Kauai.
Feb. 6-10, 1989	Seventh Annual Conference on Gastrointestinal and Hepatic Diseases, The Honolulu Medical Group Research & Education Foundation and co-sponsored by the Hawaii Medical Association. Contact: Gary Glober, MD, 1380 Lusitana St., Suite 701, Honolulu, HI 96813, 808-536-1021. Location: Westin Maui Hotel, Maui.
Feb. 13-27, 1989	Internal Medicine, William L. Nietz, Division of Education, Mayo Clinic, Rochester, MN 55905, 507-284-2085. Location: Maui Marriott.
Feb. 25-March 4, 1989	Update: Controversies in Emergency & Primary Care, Scripps Memorial Hospital-Encinitas & The American Institute of Postgraduate Education. Contact: Edith S. Bookstein, AIPE, P.O. Box 2586, La Jolla, CA 92038, 619-454-3212. Location: The Royal Lahaina Resort, Maui.
Feb. 28-March 3, 1989	The First Annual Queen's Cancer Institute Symposium: Cancer Care '89, The Queen's Cancer Institute and co-sponsored by the Hawaii Medical Association. Contact: Karen Taoka, The Queen's Center Institute, 1301 Punchbowl St., Honolulu, HI 96813, 808-547-4660. Location: Hilton Hawaiian Village, Honolulu.
March 3-5, 1989	Asia-Pacific Alzheimer's Disease Conference, Division of Geriatric Medicine, Department of Medicine, John A. Burns School of Medicine, 347 N. Kuakini St., Honolulu, HI 96817, 808-523-8461. Location: Hilton Hawaiian Village, Honolulu.
March 5-9, 1989	Asia-Pacific Osteoporosis Conference, Kuakini Osteoporosis Center, 347 N. Kuakini St., Honolulu, HI 96817, 808-547-9578. Location: Hilton Hawaiian Village, Honolulu.
March 5-8, 1989	Hotspots in Pediatric Urology, Hawaii Urological Society and co-sponsored by the Hawaii Medical Association. Contact: Vincent Ortolano, MD, 3420B Kuhio Hwy., Lihue, HI 96766, 808-245-1514. Location: Poipu, Kauai.
March 6-10, 1989	First Annual Hawaii Conference on Current Concepts in Internal Medicine, Honolulu Medical Group Research and Education Foundation and co-sponsored by the Hawaii Medical Association. Contact: Gary Glober, MD, 1380 Lusitana St., Suite 701, Honolulu, HI 96813, 808-536-1021. Location: Maui Inter-continental Wailea, Maui.
March 21-24, 1989	Topics in Rheumatology II, The Straub Foundation and co-sponsored by the Hawaii Medical Association. Contact: The Straub Foundation, 846 South Hotel St., Suite 302, Honolulu, HI 96813, 808-524-6755. Location: The Ilikai Hotel, Honolulu.
March 25-April 1, 1989	Pediatric Trauma, Scripps Memorial Hospital-Encintas & The American Institute of Postgraduate Education. Contact: Edith S. Bookstein, AIPE, P.O. Box 2586, La Jolla, CA 92038, 619-454-3212. Location: The Waiohai & Poipu Beach Hotels, Kauai.
June 5-9, 1989	The Power of The Art: Humanism, Healing and Health Care, Kauai Foundation for Continuing Education and co-sponsored by the Hawaii Medical Association. Contact: Dr. David Elpern, P.O. Box 3650, Lihue, HI 96766, 808-245-3351. Location: Sheraton Kauai, Kauai.

An Explanation

The author of the article **Elevated Cholesterol: Fact or Fancy** in the June '88 issue of the JOURNAL, Vol. 47, No. 6, p. 266, wishes to amend the second paragraph of the **Conclusion** to read as follows:

> The upper levels of normal cholesterol generally found in this age group, based on this study, appear to be high. Since the young age group did not provide us with a usable "target range" for the adult population, pending further studies, it may be necessary to lower empirically the upper limits of normal — 215 mg/dl — in order to improve the sensitivity of the test.

Tropical Myositis, the great imitator: A case report

John L. Trotter, MD*
James R. Doyle, MD**

Tropical myositis is a bacterial infection of skeletal muscles that often results in an abscess.

Although the initial case reports came from France, Brazil and Japan[1-4], subsequent reports have come predominantly from tropical countries and therefore the designation of "tropical myositis"[5]. It is a condition that can mimic or imitate a muscle or ligament sprain or even thrombophlebitis, as in this case report[6]. It may present as abdominal pain and mimic appendicitis. It has also been confused with malignant tumor[7,8,9].

Case Report

A 30-year-old Tongan man came to the Queen Emma Clinic in Honolulu complaining of pain in the right calf of two days' duration. The pain came on while running during a rugby game. The day after the game the patient walked with a slight limp but two days after the game he could not walk at all due to pain in the calf. He denied any direct blow to the calf and stated that he was in good health. He was unable to walk and stood with his weight on the left leg and the right knee flexed. The medial aspect of the right calf was tender 10 cm distal to the popliteal fossa and the right calf was 3 cm larger in circumference than the left. There was no increased skin temperature, crepitance or fluctuance in the calf. An X-ray study revealed soft tissue swelling in the medial side of the calf. A diagnosis of partial gastrocnemius muscle rupture was made and a knee immobilizer applied. Four days later (six days after onset of the initial symptoms) he had more calf pain, was unable to walk without crutches and had an oral temperature of 100.8 degrees F. The right calf was now warm and erythematous. Homan's sign was positive. The sedimentation rate was 119 mm per hour and the white blood cell count was 17,400 without a left shift. A new diagnosis of deep venous thrombosis was made and the patient was admitted to the hospital where heparin anticoagulation was started. A venogram on the second hospital day was normal and anticoagulation was discontinued. An ultrasound study of the right calf demonstrated a fluid collection in the calf that was said to be either a hematoma or an abscess. Computerized tomography revealed a fluid collection in the medial aspect of the swollen gastrocnemius muscle (Fig. 1). Needle aspiration of this area revealed pus and a diagnosis of muscle abscess was then made. Surgical drainage through an 8 cm incision yielded 80 cc of thick yellow pus from with the muscle substance. Gram stain of the pus demonstrated white cells and gram-positive cocci. Staphylococcus aureus (coagulase positive) was cultured. Pain relief after surgery was immediate. Five days of intravenous nafcillin and seven days of oral cephalexin was given and complete healing was noted at three weeks.

Discussion

This condition has been studied worldwide and it has been diagnosed most often in tropical areas of the world[5,6], although two recent reports have identified increasing recognition in temperate or even in arid climates[10,11]. The highest incidence occurs in Uganda and New Guinea[5].

In Hawaii, the disease is said to be confined to Polynesians[5], but a recent report from Tripler Army Medical Center in Honolulu, which serves active-duty military and their dependents as well as the civilian populations of American Samoa and Micronesia, revealed only five of 18 cases to be Polynesian[12].

Similar exclusive occurrence in "native populations" is noted in other countries, namely: (a) In the French Pacific Islands, where the disease is not seen in the French immigrant settlers and their descendants; (b) the disease is not seen in the sizable European and Australian population in New Guinea, and (c) in South Africa, where it is seldom seen in the white population[5,7].

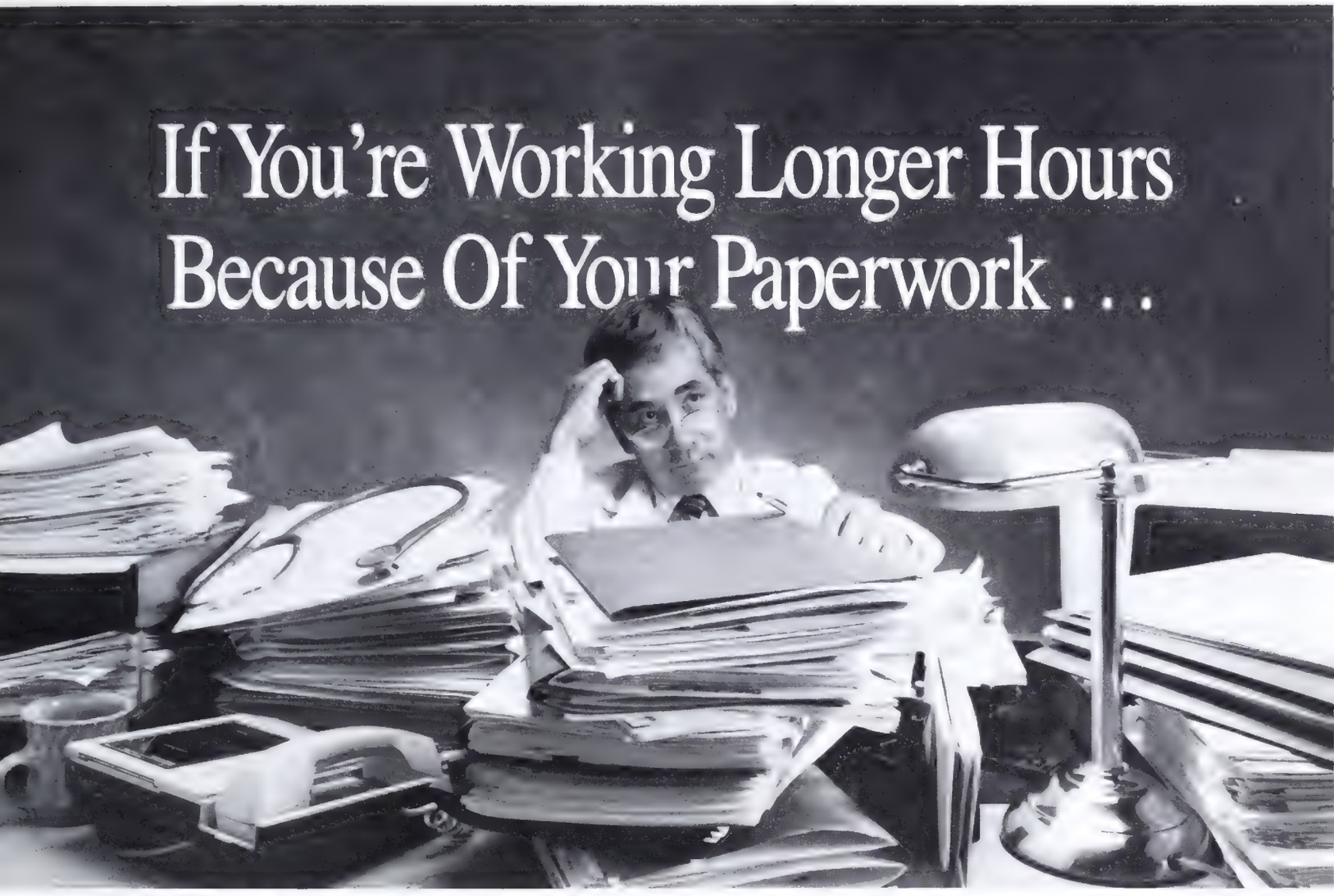
The etiology of this condition is unknown. Several associated

(Continued on page 471)

From the Division of Orthopaedics, Department of Surgery, John A. Burns School of Medicine, University of Hawaii-Manoa and the Queen Emma Clinic, The Queen's Medical Center, Honolulu.

*Former Chief Resident, Division of Orthopaedics
**Chairman, Division of Orthopaedics, John A. Burns School of Medicine, University of Hawaii-Manoa.

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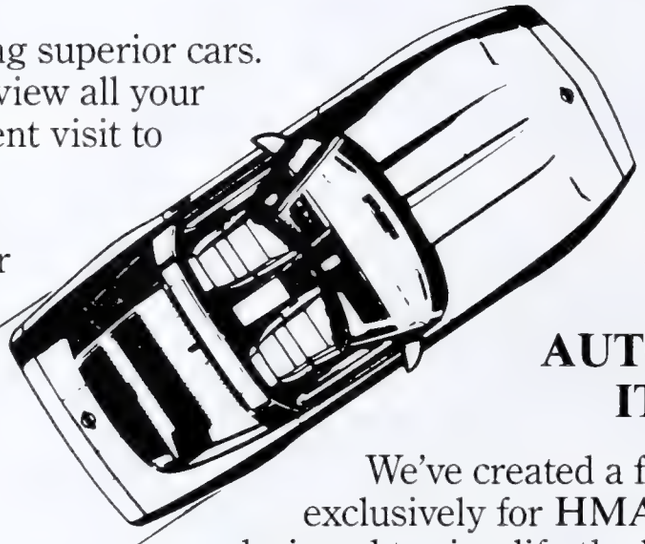
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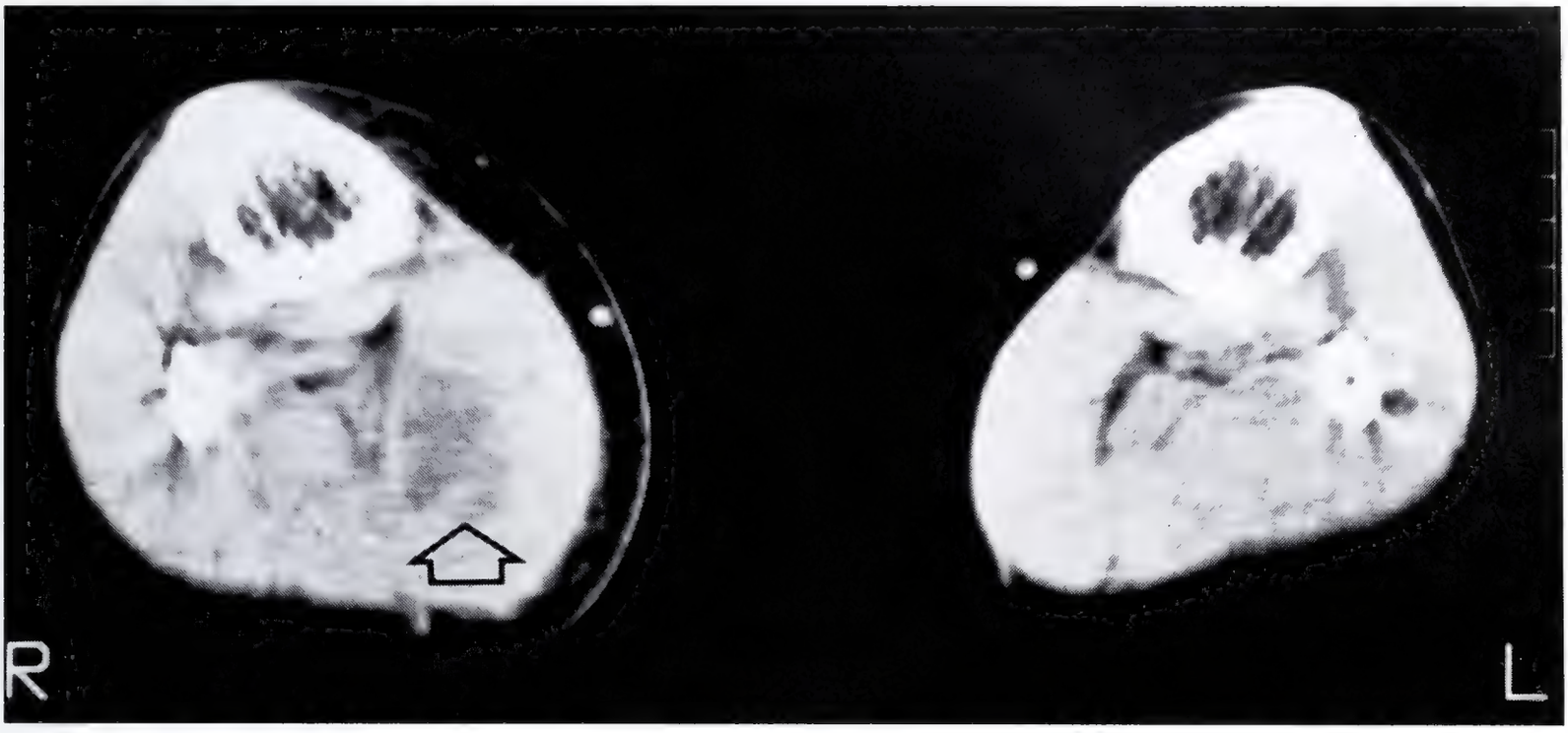


Figure 1: Computerized tomography of the right and left calf showing a fluid collection in the medial aspect of the gastrocmenius muscle (arrow) in the right calf and comparative enlargement of the right gastrocnemius muscle.

factors have been suggested and include: (1) Septic overload associated with low living standards[1], (2) trauma to the involved muscle with superimposed infection[1,13,14], (3) vulnerable muscles previously damaged by parasites[15], (4) viral infection[16], (5) immunoglobulin (IgM) antibody deficiency against Staphylococcus aureus[17], and (6) nutritional or dietary factors[5].

Of these six factors, study of the last one offers some intriguing possibilities. In New Guinea, a country of high incidence of this disease, the staple diet is sweet potatoes and yams, which are low in protein. This diet results in low output of intestinal proteases; in addition, sweet potatoes contain inhibitors that further decrease protease activity. The unaccustomed and sudden ingestion of large amounts of protein as in pig feasting may result in a condition called "Pigbel"[5]. Pigbel is a condition caused by undigested protein in the intestine, which encourages the growth of Clostridium perfringens whose toxins can cause necrosis of muscle coats, as well as peritonitis[18]. The two countries (New Guinea and Uganda) with the highest incidence of Pigbel also have the highest incidence of tropical myositis[5]. Although feasting on pork is not a way of life in Uganda, nor the food responsible for protease inactivation in Ugandan Pigbel, it (Pigbel) can occur after any abrupt dietary change from low to high protein[5]. Although Pigbel may not be the same entity as tropical myositis, the high incidence and the co-occurrence of these two conditions in New Guinea and Uganda suggest a common causative factor.

Historically, the incidence of tropical myositis in Japan corresponded to the cultivation of sweet potatoes as a major crop at the end of the 19th century. The incidence declined as consumption of sweet potatoes declined, and as protein intake gradually increased[5]. Malaysia and most Asian countries, although tropical, demonstrate a rare incidence of tropical myositis; they are predominantly rice-growing areas[5].

Conclusion

Tropical myositis is a muscle disease that usually presents as a muscle abscess. Although its etiology is uncertain, it seems to have a predilection for native populations in tropical countries. In Hawaii, it is usually seen in Polynesians. As in our case report, it may often be misdiagnosed as a strain or sprain or thrombophlebitis[6]. Because it is an abscess that is deep in the substance of the muscle, the usual signs of infection, localized erythema and increased skin temperature, may not be evident until late in the course of the disease. Unfamiliarity with this entity remains the major obstacle to appropriate management[6]. Early diagnosis, which leads to appropriate treatment, is aided by ultrasound and computerized tomography[6,19].

REFERENCES

1. Gelle G: Myosite suppuree suite de fatigue musculaire: infection purulente: mort. *Bull Soc Anat Paris* 33:414-7, 1858.
2. de Salvia B: Myosite suppurada clos musculos rectos do abdomen: incisio: cura. *Reva Curso Prat Theor Fac Med Rio de Jan* 3:49-52, 1866.
3. Scriba J: Beitrag zur aetiologie der myositis acuta. *Deut Zeit Chir* 22:497, 1885.
4. Ito H, Sinnaka S: Zur kentniss der myositis infection in Japan. *Deut Zeit Chir* 80:302-16, 1904.
5. Shepherd JJ: Tropical myositis: is it an entity and what is its cause? *Lancet* II:1240-2, 1983.
6. Schlech WF III, Moulton P, Kaiser AB: Pyomyositis: tropical disease in a temperate climate. *Am J Med* 71:900-2, 1981.
7. Dall DM, Cywes S: Pyogenic abdominal wall and psoas abscesses in children. *S Afr Med J* 40:532-34, 1966.
8. Beck W, Grose C: Pyomyositis presenting as acute abdominal pain. *Ped Infect Dis* 3:445-8, 1984.
9. Tucker RE, Winter WG, Del Valle C, Uematsu A, Libke R: Pyomyositis mimicking malignant tumor. *J Bone Joint Surg* 60A:701-3, 1978.
10. Gibson RK, Rosenthal SJ, Lukert BP: Pyomyositis increasing recognition in temperate climates. *Am J Med* 77:768-72, 1984.
11. Abdulla MA, Sanie: Tropical pyomyositis in Saudi Arabia. *Ann Trop Paediatr* (2)1:45-6, 1982.

(Continued on page 472)

TROPICAL MYOSITIS *(Continued from page 471)*

12. Brown JD, Wheeler B: Pyomyositis, report of 18 cases in Hawaii. *Arch Int Med* 144:1749-51, 1984.
13. Burkitt RT: Tropical pyomyositis. *J Trop Med Hyg* 50:71-5, 1947.
14. Ajao OG, Agao AO: Tropical pyomyositis. *Int Surg* 67:414-6, 1982.
15. Chesterman CC: Tropical myositis. *Trans Roc Soc Trop Med Hyg* 24:359, 1930.
16. Taylor JF, Fluck D: Tropical myositis ultrastructural studies. *J Clin Path* 29:1081-84, 1976.
17. Giasuddin AS, Idoko JA, Lawande RV: Tropical pyomyositis: is it an immunodeficiency disease? *Am J Trop Med Hyg* 35:1231-4, 1986.
18. Lawrence G, Walker PD: Pathogenesis of enteritis in Papua New Guinea. *Lancet* I:125-6, 1976.
19. Weinberg WG, Dembert ML: Tropical pyomyositis: delineation by gray scale ultrasound. *Am J Trop Med Hyg* 33:930-32, 1984.

. . . . assistance for the hematopathologist

Current advances in drugs used for hematologic disorders

Robert T.W. Jim, MD* and
James Lumeng, MD**

Presented at the 126th Annual Scientific Meeting of the Hawaii Medical Association, Panel on Current Advances in Pharmacotherapeutics, November 11, 1982, Hilton Hawaiian Village Hotel, Tapa Ballroom, Honolulu, Hawaii.

Many new, active, effective and useful drugs are available to the clinician in a variety of hematologic disorders.

Aplastic Anemia

Antilymphocyte globulin (ALG) has shown exceeding promise in aplastic anemia[1-3] and may replace bone marrow transplantation as definitive specific treatment. Etiocholanolone, a steroidal testosterone metabolite, and prednisone have been reported as demonstrating temporary hematologic improvement in aplastic anemia[4]. More recently, lithium[5-6] and massive folic acid appear to benefit certain aplastic and primary refractory anemias.[7-8]

Immune Thrombocytopenias (Idiopathic Thrombocytopenic Purpura and Drug Induced)

In addition to the older immuno-suppressive cytotoxic agents used for immune thrombocytopenias such as cyclophosphamide, Immuran, 6-mercaptopurine, several new agents have improved platelet levels in idiopathic thrombocytopenic purpura and drug induced thrombocytopenias, including vincristine,[9-10] vinblastine i.v., vinblastine-treated platelets,[11-14] frentizole,[15] colchicine[16], high dose i.v. gamma globulin[17-18] and interferon.[19] These agents appear most useful in steroid-resistant drug induced immune thrombocytopenias, in post-splenectomy idiopathic thrombocytopenic purpura, in individuals who refuse splenectomy for ITP or when surgery is contra-indicated in ITP. The role for these new agents in the primary therapy of ITP remains to be determined.

Leukopenia

Leukopenia due to congenital or genetic causes, irradiation, chemicals, drug chemotherapy or Felty's syndrome has benefitted from lithium therapy and the use of the drug in these entities may be clinically useful.[20-27]

Coagulation Deficiencies (Hemophilia, von Willebrand's Disease, Uremia)

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(Continued on page 477)

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University of Hawaii
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University of Hawaii
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This article was submitted for publication in 1982 but was "fumbled by the ball carriers." It is still pertinent in 1988 and essentially unchanged in content.—Ed.



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Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa.*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION)

PRECAUTIONS

General.

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed

Pregnancy – Pregnancy Category C.

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS)

Nursing Mothers.

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS)

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%)

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%)

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%)

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION)

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION)

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

For further information, contact the Miles Information Service: 1-800-642-4776. In VA. call collect: 703-391-7888.

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Artificial blood is per-fluorocarbon (FLUOSOL) and is effective as an oxygen-carrying substance. It is effective for only 72 hours, but blood typing is unnecessary, it can be stored at room temperature for up to three years and is inexpensive. Its primary use is for individuals who refuse blood on religious grounds (Jehovah's Witness), also under emergency conditions when blood is not available (ambulance, emergency room, military battlefield), when rare blood types are not available, when antibodies interfere with crossmatching and for carbon monoxide poisoning.[45-48]

REFERENCES

1. Speck, B et al.: Treatment of Aplastic Anemia by Anti-lymphocyte Globulin with and without Allogeneic Bone Marrow Infusions, *Lancet* 2:1145, 1978.
2. Pederson-Bjergaard, J: Severe Aplastic Anemia with Complete Autologous Marrow Reconstitution Following Treatment with Anti-lymphocyte Globulin, *Scand J Haemat* 21:14, 1978.
3. Silingardi, V: Recovery from Aplastic Anemia after Treatment with Anti-lymphocyte Globulin, *Arch Int Med* 139:582, 1979.
4. Besa, EC et al.: Aetiocholanolone and Prednisolone Therapy in Patients with Severe Bone Marrow Failure, *Lancet* 4/2/77, p. 728.
5. Barrett, AJ et al.: Lithium Therapy in Aplastic Anemia, *Lancet* 1/22/77, p. 202.
6. Blum, SF et al.: Lithium Therapy of Aplastic Anemia, *New Eng J Med* 300:677.
7. Brand, RF et al.: Folate Induced Remission in Aplastic Anemia with Familial Defect of Cellular Folate Uptake, *New Eng J Med* 298:471, 1978.
8. Jim, RTS: Folate Induced Remission in Primary Refractory Anemia, *Hawaii Med J* 40:373, 1981.
9. Ahn, YS et al.: Vincristine Therapy of Idiopathic and Secondary Thrombocytopenias, *New Eng J Med* 291:376, 1974.
10. Rogers, GH: Long Term Effectiveness of Vincristine in the Therapy of Refractory Idiopathic Autoimmune Thrombocytopenia, *New Eng J Med* 303:587, 1980.
11. Ahn, YS et al.: The Treatment of Idopathic Thrombocytopenic Purpura with Vinblastine-loaded Platelets, *New Eng J Med* 298:1101, 1978.
12. Rogers, GH: Refractory Idiopathic Thrombocytopenic Purpura, *Ann Int Med* 92:713, 1980.
13. Kelton, JG: The Reversible binding of Vinblastine to Platelets: Implication for Therapy, *Blood* 57:431, 1981.
14. Jim RTS: Use of Vinblastine-Treated Platelets in Drug Immune Thrombocytopenia, *Hawaii Med J* 40:182, 1981.
15. O'Duffy, JD: Frentizole Therapy of Thrombocytopenia in S.L.E. and Refractory Idiopathic Thrombocytopenic Purpura, *Mayo Clinic Proceed* 55:601, 1980.
16. DeBuglio, A: Personal communication.
17. Imbach et al.: High Dose IV Gammaglobulin for Idiopathic Thrombocytopenic Purpura in Childhood, *Lancet* 6/18/81, p. 1228.
18. Schmidt, RE: High Dose IV Gammaglobulin for Idiopathic Thrombocytopenic Purpura, *Lancet* 8/29/81, p. 475.
19. Kahn, A and Hill, NO: Interferon Administration in Idiopathic Thrombocytopenic Purpura and Concomitant Chickenpox, *J Clin Hematol and Oncology* 12:45, 1982.
20. Gupta, RC: Efficacy of Lithium in Rheumatoid Arthritis with Granulocytopenia (Felty's Syndrome), *Arthritis Rheum* 18:179, 1975.
21. Gupta, RC: Felty's Syndrome. Effect of Lithium on Granulopoiesis, *Am J Med* 61:29, 1976.
22. Greco, FA: Lithium and Leucocytosis, *Ann Int Med* 84:102, 1976.
23. Barrett, AJ: Lithium Therapy in Congenital Neutropenia, *Lancet* 2/24 & 31/77, p. 1357.
24. Tisman, G: Lithium-Induced Granulocytosis, *Lancet* 7/30/77, p. 251.
25. Lyman, GH: The Use of Lithium Carbonate to Reduce Infection and Leukopenia During Systemic Chemotherapy, *New Eng J Med* 302:257, 1980.
26. Stein, R: Lithium Carbonate Granulocyte Production, *Cancer* 48:2696, 1981.
27. Pazdur, R: Cytotoxic Chemotherapy for Cancer in Felty's Syndrome. Role of Lithium Carbonate, *Blood* 58:440, 1981.
28. Manucci, PM: DDAVP in Hemophilia, *Lancet* 12/3/77, p. 1171. 1:869, 1977.
29.-30. Hemker, H: Oral Treatment of Hemophilia A by GI Absorption of Factor VIII Entrapped in Liposomes, *Lancet* 6/13/81, p. 1310 and *Lancet* 1/12/80.
31. Lowe, G: DDAVP in Hemophilia, *Lancet* 9/17/77.
32. Boulton, F: DDAVP and Cryoprecipitates in Mild Hemophilia, *Lancet* 9/8/77, p. 535.
33. Austen, D: Oral Treatment of Hemophilia, *Lancet* 8/15/81, p. 359.
34. Lusher, J: Efficacy of Prothrombin Complex in Hemophiliac with Antibodies to Factor VIII, *New Eng J Med* 303:421, 1980.
35. Abildgaard, C: Anti-Inhibitor Coagulant Complex (Autoplex) for Treatment of Factor VIII Inhibitors in Hemophilia, *Blood* 56:978, 1980.
36. Sjamosedin, L: The Effect of Activated Prothrombin Complex Concentrate on Joint and Muscle Bleeding in Patients with Hemophilia A and Antibodies to Factor VIII, *New Eng J Med* 305:719, 1981.
37. Roberts, H: Hemophiliacs with Inhibitors: Therapeutic Option, *New Eng J Med* 305:757, 1981.
38. Hewitt, P: Highly Purified Porcine VIII in Hemophilia A, *Lancet* 3/27/82, p. 741.
39. Blume, KG: Continuous IV Deferoxamine Infusion, *JAMA* 239:2149, 1978.
40. Green, R: Enhancement of Iron Chelation by Deferoxamine Entrapped in Red Blood Cell Ghosts, *Blood* 57:866, 1981.
41. Callender, S: Iron Chelation with Oral Deferoxamine, *Lancet* 9/27/80, p. 689.
42. Kattamis, C: Oral Deferoxamine in Young Patients with Thalassemia, *Lancet* 1/3/81, p. 51.
43. Peterson, CM: Chelation Studies with 2-3-dihydroxy Benzoic Acid in Patients with Beta Thalassemia Major, *Brit Med J* 33:477, 1976.
44. Alarcon, PA: Iron Absorption in the Thalassemia Syndromes and Its Inhibition by Tea, *New Eng J Med* 300:5, 1979.
45. *Chin Therap* 2:306, 1979.
46. *JAMA* 243:719, 1980; 247-1104, 1980.
47. *Medical World News* 1/21/80, p. 17.
48. *New Eng J Med* 303:391, 1980.

Abilities Expo '88: The Exhibition Par Excellence

Louis J. Polskin, PhD, MD*

Abilities Expo '88, held in Los Angeles, Calif., June 10 through 12, was the "largest continuous display in the nation" that featured products, education and services for the disabled or handicapped. An estimated 15,000 people attended this event staged at the Los Angeles Convention Center, the area of which surpasses that of a football field. Expo highlights included aerobics, karate demonstrations and fashion shows. The center, equipped with a full-size tennis court, also accommodated a three-day tennis tournament for wheelchair participants. Also featured, in the center's giant lecture hall, was a display of original paintings by disabled artists. Some of these works were also offered as door prizes.

Attendees at Abilities Expo '88 covered all ages and occupations. Badges identified engineers, rehabilitation counselors, physical therapists, exercise specialists, social workers, nurses, doctors, orthopedic specialists, students, physiatrists and faculty members from the colleges in the area.

Director Dick Wooten of RCW Productions Inc., Encinitas, Calif., is credited with organizing both this year's event and that of last year. The 58-page brochure of Abilities Expo '88 listed 222 booths that were staffed by very gracious representatives. Every visitor was showered with voluminous literature, not to mention the free items such as pens, pencils, writing pads, key rings, shoelaces, and, invariably, a chance to win a prize. (Even this writer won a 20% discount card for purchases at Abbey Medical.)

United Airlines kindly offered Expo visitors a 5% to 40% discount for the round-trip airline fare. Moreover, four hotels within a short distance of the convention center awarded all attendees a 10% discount on the room charge. The hotels also guaranteed that entrance to rooms and bathrooms would be wide enough for the wheelchair user.

In sharp contrast was the situation in nearly all modern aircraft (including the round-trip United Airlines 747 flight taken by this writer and wife, a wheelchair user.) Briefly, it is IMPOSSIBLE for the wheelchair-bound to ride the narrow aisles, let alone gain entrance to that petite closet, called a "toilet"! Perhaps by the early 1990s, airlines, worldwide, will correct such deficiencies!

RCW Productions Inc., supervisors of Abilities Expo '88, merited everyone's thanks for providing free conveyances, equipped with battery-powered lifts, for the benefit of the wheelchair user and any other attendees. These vans made rounds between hotels and the convention center every 15 minutes.

Next year, two such educational Expos have been finalized by RCW Productions Inc. One will be in Los Angeles, May 19 through 21, and the other in St. Louis, Mo., June 2-4.

St. Louis was selected for that convention because a one-day automobile drive permits one to reach one or more major cities. Such a geographic area has a population of 17 million. Lying on the main course of the Mississippi River and about halfway between the Appalachian mountains to the East, and the Rockies to the West, St. Louis will predictably attract thousands to Expo '89.

Sadly, as pointed out by writer Joe Weider[1], there are almost 10 million wheelchair-bound people in the United States. Each year 25,000 Americans suffer spinal-cord injuries from traffic accidents.

Medical lectures

Abilities Expo '88 offered 13 hours of scientific lectures pertaining to the health and well-being of the disabled or paralyzed. In the opinion of this writer, the quality of these presentations, including live demonstrations and slides, definitely equaled the caliber of lectures sought by doctors, nurses, and pharmacists to satisfy the requirements for renewal of respective professional licenses and membership requirements in certain professional organizations. However, such CME credits were not available this time. It is hoped that in 1989, RCW Products Inc. will obtain appropriate credits for its seminars and thus ensure a larger attendance of health-care professionals.

In this writer's opinion, the most outstanding presentation at Abilities Expo '88 was the series pertaining to electrical stimulation and computer-generated nerve stimulation for rehabilitating paralyzed muscles in humans. Dr. Jerold Petrosky, professor at the School of Medicine, University of California, and staff, deserve the highest plaudits for their research. Another excellent review pertained to the treatment and complications of pressure sores, so common among disabled who are bedridden. Speaker Kathi Whitaker, RN, Director of Education at

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ROHO Inc., pointed out that treatment of the complications of severe pressure sores might cost a patient $7,500 over a six-month period.

"Let me win, but if I cannot, let me be brave in the attempt"

Abilities Expo '88 echoed one common purpose, namely, to make the lives of the impaired more productive, more purposeful and more enjoyable. The lame, the halt, the paralyzed, including the blind and the deaf, handicapped from mild to severe, comprised an estimated two out of five attendees. In every aisle stalked that infamous foursome, "HIDE," which this writer identifies as the acronym: "H" for HANDICAP, "I" for IMPAIRMENT, "D" for DISABILITY and "E" for EMBARRASSMENT. Yet, upon emergence from the exhibits of Abilities Expo '88, and the uplifting scientific seminars, one sensed a new esprit de corps among all attendees. What was once a depressing HIDE, now bore the very proud acronym (Fig. 1): "H" for HOPEFUL, "I" for INDEPENDENT, "D" for DIGNIFIED and "E" for EMPLOYABLE! Wheelchair users propelled about by hand, by foot, by battery, or with the help of an assistant. Many without one or both arms, or one or both legs, or otherwise cursed with functionless extremities following twisted birth defects, accidents or strokes, whirled about independently in battery-powered wheelchairs by means of the chin against a toggle-switch control. This awesome sight sent the world a clear message: *Life can, and will, go forward!*

Figure 1: From HIDE to SEEK

HANDICAP (societal level): A disadvantage or disability, physical or mental, that hinders progress or success. → **HOPEFUL**

IMPAIRMENT (organ level): Diminished strength, value or excellence; a weakened or damaged state, in quantity, or in quality. → **INDEPENDENT**

DISABILITY (personal level): Lack of physical power, mental ability or strength; a flaw that prevents living a full, normal life, or performance of any specific job. → **DIGNIFIED**

EMBARRASSMENT (psychological level): State of being impeded, uncomfortable, self-conscious, chagrined or ashamed. (Random House Dictionary) → **EMPLOYABLE**

Employment opportunities for people with disabilities

"There are no disabled people in the world, only people with varying degrees of ability," says Dr. Henry Viscardi.

One of the prime wishes and goals of the disabled is to remain productive and purposeful. Professor William G. Johnson, Department of Economics, Syracuse University, New York, estimated that the number of partially or totally disabled *working-age* Americans is nearly 21.9 million. Moreover, in the last 25 years, the prevalence of work-disability among *prime-age* Americans, ages 25 to 54, has increased 25%, while those ages 45 to 62 have increased in number by 40%[3].

At Abilities Expo '88, employment opportunities for the physically impaired were offered by representatives from 26 agencies of the State of California. A few of these state offices were the Departments of Health, Water and Power, Alcohol and Drugs, Rehabilitation, Taxation, and Highway Patrol, plus the Energy Commission, the Board of Equalization, and the Corps of Engineers.

All California state agencies, under "Operation LEAP" (Limited Examination and Appointment Program), hire handicapped applicants after reviewing their formal education and past working experience. The formal civil service examination is *not* emphasized and in most cases entirely omitted. There were job offerings from such elite federal sources as the CIA, the IRS, the VA and the Pacific Missile (CA) Test Center. Openings for disabled applicants in many disciplines and programs were also offered by such industries as IBM, TRW Inc. and the Northrop Corp. Boldly advertised were jobs involving computers, accounting, auditing, clerical work, teaching and the building trades. Not to be overlooked were the "blue-and-white jobs" offered by California hospitals, nursing homes and rehabilitation centers.

For the job-seeking applicant, the primary source is the President's Committee on Employment of People with Disabilities (formerly the Committee on Employment of the Handicapped). Professionals may request being placed on its mailing list, including the excellent free journal, *Worklife* (which debuted this year), by contacting this committee at 1111 20th St., NW, Room 636, Washington, D.C. 20036 (telephone: 1-800-526-7234). Callers will be directed to any of the 2,200 public employment agencies nationwide[4].

A recent Louis Harris poll among industrial line managers reported that 46% of workers with disabilities were more willing to work than non-handicapped employees[5]. Moreover, 40% of the managers revealed that handicapped or disabled employees were more punctual, more reliable and less prone to absenteeism than employees outwardly free of impairment. In addition, 80% of the managers admitted that handicapped employees were capable of producing as much, if not more per session, than the non-disabled workers.

Since March, nearly 400,000 companies (or in certain cases, individual employers) who had contracts with the federal gov-

(Continued on page 485)

ernment, have had to list the number of employees who were veterans — including those of the Vietnam war — who were classified as impaired, disabled or handicapped[4].

Educational resources for the disabled

Among the booths at this year's Expo, there were at least 10 that emphasized benefits, educational leads, body-conditioning; events, meetings and tools for those with physical disabilities. The majority of these were national in scope, such as the Challenge Foundation, the American Wheel Chair Sailing Association, the National Multiple Sclerosis Society, the Arthritis Foundation, the National Spinal Cord Injury Association, the Spina Bifida Association, the National Ataxia Foundation and the American Paralysis Association.

Other exhibitors featured books and publications, by subscription, related to travel, health, opportunities and supplies for the handicapped. Many of these were vaguely familiar to this writer, namely, *The Itinerary, Mainstream Magazine, Paraplegia News, Handiable Newsletter, Continuing Care Magazine, Challenged American, A Positive Approach Magazine,* and *Accent on Living Magazine.*

One outstanding newspaper merits the attention of every professional. It is titled *The Source—the Paper for People with Physical Disabilities* and it is a *free* publication. For these free copies, contact *The Source,* Rt. #3, P.O. Box 458-B, Escondido, CA 92025.

Booths, booths, booths

At Abilities Expo '88 there were vendors and demonstrators of products for nearly every need and pleasure of the handicapped. Wherever feasible, the latest gadgetry to improve the safety and comfort of the disabled was emphasized. Outstanding was the Brass Ring Creative Clothing Designs Co. of Canoga Park, Calif., which featured clothes fortified with velcro closures, zippers, hooks and back snaps to improve self-dressing by the handicapped.

A unique, aluminum-framed, three-wheel vehicle, which serves both as exercising equipment and a means for outdoor travel, is the 65-pound Rowcycle that sells for about $1,675 by the Rowcycle Co., Fresno, Calif. To propel this vehicle requires the function of one or both hands, or one or both legs. The vehicle can be modified to suit the needs of special groups, such as hemiplegics. For added muscle-strengthening and body-conditioning, the occupant might hitch on a wagon, or a wheelchair, at the rear of the Rowcycle. Everyone was impressed with these "tandems," as they raced by in the aisles of the convention center.

Automobiles and minivans exhibited modifications that permitted the wheelchair user to enter the vehicle without leaving the chair, anchor self and chair with proper tie-downs, and then drive the automobile by means of special switches and other gadgetry. For the individual with absent function of the feet, but satisfactory control of the hands, the Ricon Corp. of Sun Valley, Calif., sells an automotive hand control that permits very reliable acceleration, deceleration, and braking of the vehicles.

Care Concepts Inc. of Phoenix, Ariz., converts minivans by actually lowering the floor of the vehicle about 10 inches. Such a change offers a relatively small incline for the special ramp upon which a wheelchair, with occupant, can easily be moved to the interior of the vehicle. With extras, such as the opening of ramp and sliding door by battery power, the converted Dodge might cost about $29,000.

Wheelchairs

Wheelchair models were demonstrated by exhibitors from several companies. Kemp Inc., Sunnyvale, Calif., manufactures a wheelchair that responds to one's voice! In this writer's opinion, one of the most unique and practical additions to the manual-operated wheelchair is the 25-pound power unit manufactured by DAMACO Inc. in Chatsworth, Calif. Energy for the power unit is supplied by two non-fluid, "gel-type" batteries, weighing about 8 pounds each, suspended under the seat of the wheelchair. The chair is propelled by means of a rotating shaft, at the ends of which are rubberized rollers, firmly pressed against the tires. By means of an extended control unit, with a toggle switch or joy stick, the operator may cruise freely about, whether on the street, in a shopping mall or at an airport, fully confident that the wheelchair will traverse 10 miles before it becomes necessary to recharge the batteries. Not to be overlooked is the fact that all of the aforementioned parts can be attached, or dismantled, at will *without* the need for tools. Special valises are also available to carry the equipment. Depending on the options chosen, such a power package will cost approximately $2,500. Even in the event of power failure, with, or without, the dismantling feature of the DAMACO power unit, the wheelchair user can readily propel his or her chair manually.

For the wheelchair user who enjoys the outdoors and the thrill of riding a motorcycle, there is the three-wheel, gasoline-powered "Chariot" manufactured by Cottle Industries Inc. of Fairfield, Iowa. The user enters the Chariot from the rear, buckles down both self and wheelchair as specified, and without leaving the chair drives the vechicle at will. Special switches and related gadgetry simplify the control of this two-stroke powered scooter Honda model that attains a speed of 25 miles per hour.

If price is no barrier, wheelchair users who must go up steps to enter or leave a building (particularly, when access to such buildings lack a suitable ramp) would be interested in the "Access." Essentially a miniaturized tank that can carry the occupant up or down stairs, this model is manufactured by NATCO Medical Corp. of Sunnyvale, Calif.

Conclusion: The best three

The booths exhibiting phones, dogs and shoes had the most lasting impressions on this writer.

- *Phones.* Most valuable for the disabled individual who, for the most part, lives alone, is the Able Phone-100, manufactured by the D.Q.P. Co. of Grass Valley, Calif. This model is cordless and requires no hands for operation, thus obviating the need of dials, switches or buttons. The Able Phone-100 can be carried outdoors and attached to the wheelchair. It responds to a whistle — a tone adjustable to the pitch of the user's voice — in order to contact an emergency number. Rechargeable batteries also permit the operation of the Able Phone-100 in the event of a power outage. Faced with an emergency in an accident or fire, the owner of such a telephone might well find it to be a lifesaver!
- *Dogs.* Canine Companions for Independence, Rancho Santa Fe, Calif., exhibited dogs, identified as "signal" or "service" animals that were trained to work as assistants for individuals with disabilities, *other than blindness.* The canine graduate from this *non*profit organization is able to respond to

(Continued on page 487)

Medical decisions and premature disclosures

Irwin J. Schatz, MD*

Consider this: The first column of the front page of the Sunday, April 10 New York Times *announces an extraordinary event in clinical cardiology: "New Drug Findings on Heart Attack Buoying Doctors"*[1]*. In a space usually reserved for wars, scandals, and hijackings, there appears an article on thrombolytic therapy of acute myocardial infarction. "A 50% reduction occurred in the death rate among patients given aspirin together with streptokinase immediately after onset of a heart attack," the* Times *went on to report. This was all the specific data presented of a report from Great Britain at a recent meeting of the American College of Cardiology.*

Did the facts in the *Times* justify this extraordinary emphasis? I think not, for several reasons.

If the article was an attempt to provide the lay public with a comprehensive assessment of thrombolytic therapy for acute myocardial infarction, then it was incomplete. For instance, available evidence shows that thrombolytic therapy significantly improves survival in patients with anterior infarction, but not those with inferior infarction (which represent approximately 40% to 50% of those reaching the hospital)[2]. Some studies suggest that such therapy is helpful only in patients with a first infarct, and who are under 75 years of age. Moreover, the risk of serious bleeding has ranged up to 40% in patients given these drugs, with a need for transfusion in 22%[3]. None of these facts was disclosed.

Unfortunately, the media sometimes present distorted or incomplete information, often before physicians have had an opportunity to evaluate properly the research upon which this is based. To provide only portions of clinical research data, or to do so in a form and a manner that implies exceptional achievement, when the scientific results do not support such emphasis, may be more of a disservice than an enlightenment. Positioning the article on the front page of the nation's most important newspaper surely has a powerful impact on the reader. The message conveyed is that there has been a major scientific advance. Such "breakthroughs" have been reported almost ceaselessly in the lay press over the past few decades. Most are soon forgotten, usually because they do not withstand the rigorous testing by critical physicians and the collective practice experience. Initial overenthusiasm, often generated by the sophisticated marketing techniques of the industrial-medical complex, is followed by a significant loss of credibility. The role of a new process or therapeutic modality subsequently settles somewhere between the poles of furious enthusiasm and apathetic nihilism. By then, however, the public has lost interest and the media have marched on to another great "breakthrough."

The practitioner, on the other hand, must make clinical decisions based on what is best for his/her patient. To prove that something is feasible and *can* be done is just not enough; ultimately, the question is, Should it be done? A dramatic alleged effect should not be a substitute for lasting benefit[4].

We all know that clinical research provides data upon which new therapies are based. Such investigation is often lengthy, tedious, and sometimes controversial. The end step in this process is publication in a reputable medical journal after peer review. Rigorous review by objective, unbiased experts is essential. The practicing physician will then make a personal judgment about whether a proposed new therapy has merit. He or she will pose the following questions: Were the objectives of the research clear? Was the methodology scientifically valid? Were the results properly presented and were statistical conclusions correct? Were the complications and side effects determined, tabulated and prominently displayed? Do the data justify the conclusions? Did benefits outweigh risks? Was the natural history of the disease altered favorably? Answers to these questions must be acceptable.

This time-consuming process, which permits the careful clinician to select proven advances from among those about which serious questions remain, may be profoundly altered by premature disclosures in the lay media, which induce enormous pressures by the public upon the practitioner. The right to know is important, but public reporting must be both responsible and thoughtful. This is a delicate balance that seems to me requires more attention than it received from the *New York Times* on Sunday, April 10.

*Professor and chairman
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Honolulu, Hawaii 96813

REFERENCES

1. *New York Times,* p. 1, Sunday, April 10, 1988.
2. Gruppo Italiano per lo Studio della Streptochinasi nell'Infarto Miocardio (GISSI). Effectiveness of intravenous thrombolytic treatment in acute myocardial infarction. *Lancet* 1986; 1:397-402.
3. Mueller HS, Rao AK, Forman SA: TIMI investigators. Thrombolyis in myocardial infarction (TIMI: comparative studies of coronary reperfusion and systemic fibrinogenolysis with two forms of recombinant tissue-type plasminogen activator). *Jrnl Am Coll Cardio* 1987; 10:479-490.
4. Borer JS: t-PA and the principles of drug approval. *New Engl Jrnl Med* 1987; 317:1659-1661.

ABILITIES EXPO '88

(Continued from page 485)

89 (eighty-nine!) commands. Upon command, these dogs assist disabled people by picking up a dropped object, or turning off a light. Moreover, the trained dog will alert the handicapped person when there is a knocking at the door, ringing of the telephone or the crying of a baby. Supported by such a companion, the handicapped individual is definitely capable of dealing with many of the limitations associated with loneliness, including the physical and emotional stresses he or she must face each day.

For the past seven years the State of California has been pioneering legislation for the disabled person who might benefit from the companionship of a "service" or "signal" dog. It's hoped that in the very near future, California laws will enable the disabled person who has a canine companion to enjoy the same privileges now granted only to the blind. As such, both the handicapped as well as the blind accompanied by a canine assistant will have legal access to public transport, places of lodging and amusement, restaurants and other public facilities. Such dogs, of course, must have been trained in state-approved schools and bear proof of certification[6].

● *Shoes.* This writer's choice of the most unique display was that by TOSC, the acronym for "The One Shoe Crew," from Sacramento, Calif. Founded in 1986, its purpose is to find matching partners to share the cost of a pair of shoes, for the afflicted who sadly need only one shoe, or due to defects, might require shoes of two different sizes. Today, TOSC has more than 6,000 *single shoes that are being offered free* to the qualified user merely for the cost of postage! For information, contact The One Shoe Crew, 86 Clavela Ave., Sacramento, Calif., (916) 682-7655.

REFERENCES

1. Weider J: Fitness is for every body; from Publisher's Letter "From the top," April 6, 1988, per Rowcycle Inc., Fresno, Calif. 93722
2. Viscardi H: The second life of H. Viscardi, *Worklife,* 1:16-19, 1988.
3. Johnson WG: Work disability and discrimination: semantically a problem?; *Worklife:* :28-30, 1988
4. Editor: Vet Hiring Report Requirement; *Paraplegia News:* 31: May, 1988.
5. Advertisement of the President's Commitee on Employment of People with Disabilities; Some People can hold a job better than others; *Mainstream Magazine:* 32, May 19, 1988.
6. New World for Persons with Disabilities (California Assoc. of the Physically Handicapped Inc.); Service Dogs; 44: Feb. 9, 1988.

Tole Mour to arrive in Honolulu

Tole Mour, the Marimed Foundation's seagoing health care center, will arrive in Honolulu on November 2, 8 a.m., Pier 8. (See JOURNAL, Vol. 47, No. 5, May 1988.) Christened in Seattle on August 12, the medical schooner is homeported in Honolulu and will return annually for drydocking and inspection by the U.S. Coast Guard.

The blessing of Tole Mour and dedication of The Queen's Health Care Center in memory of Charles S. Judd, Jr., MD will both take place on November 4 at 11 a.m. Public tours of the ship are scheduled for November 6, 13, and 16.

Tole Mour will depart for Majuro, Marshall Islands on November 29.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

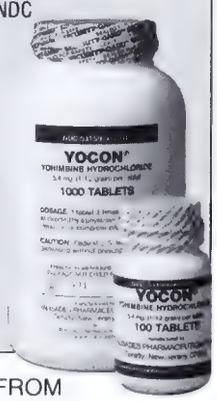
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85

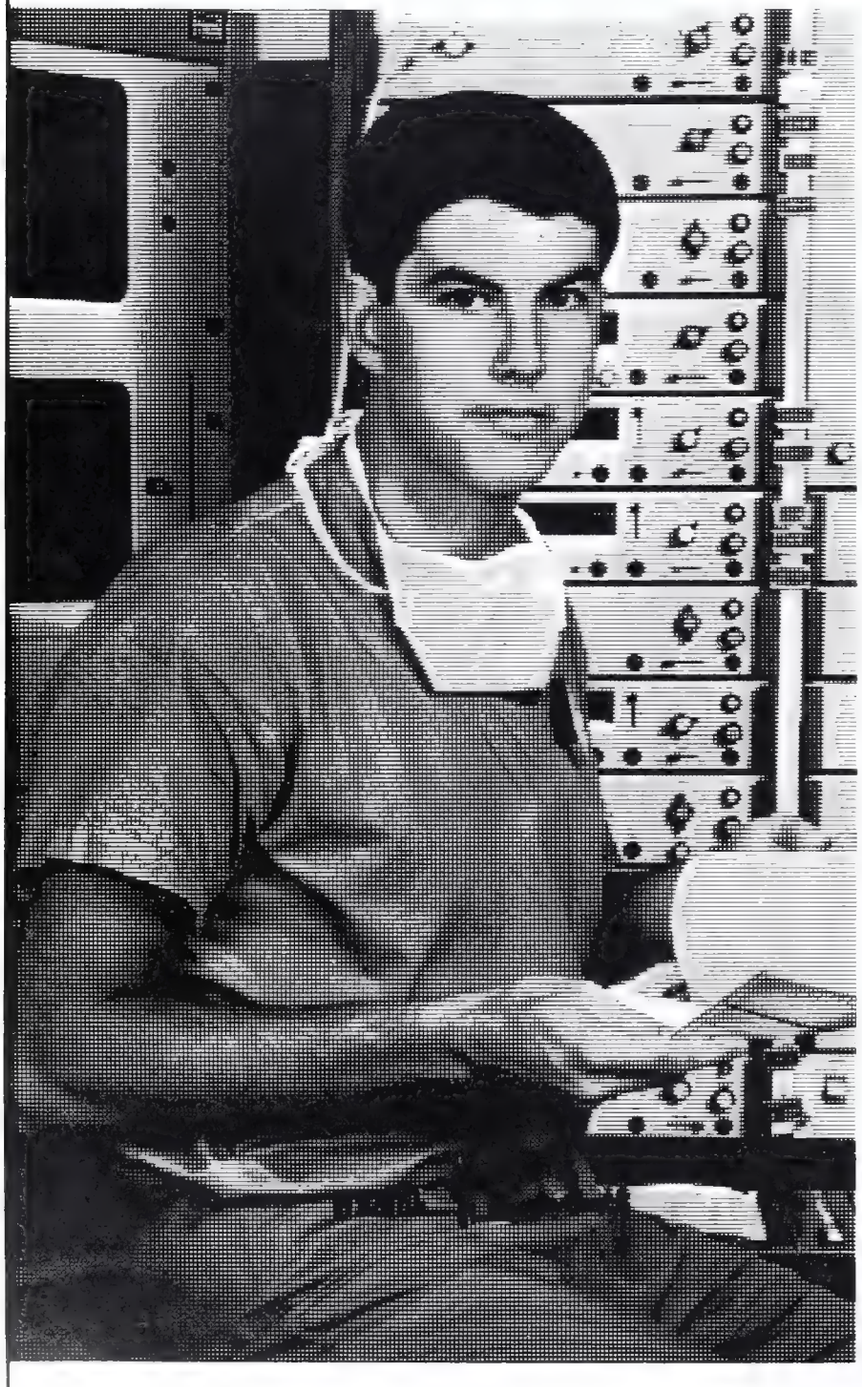


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Here we go again!

We've repeatedly harped on the subject of "lifters" versus "leaners," to the point of feeling like a nagging housewife or an old plantation luna!

This time, however, we wish to commend the members of our Association–the many of them–who have contributed a total of 23,000 doctor-hours in 1986 and the same in 1987, to quote our genial Executive Director Jon Won. Nearly 50,000 hours, wow!

How many separate physician members are involved, is hard to say, says Jon, but if every one of our 1,500 or so HMA members put in 30 hours for HMA in a year–half of the average physician's work week –that figure would be surpassed and the load would be better distributed.

Members–and particularly non-members–have asked, complained even: "What does the HMA, or the County Medical Societies, do, anyway?" Our answer could be: "We put in 23,000 doctor-hours a year, thank you." Does that mean spinning wheels uselessly? We hope not.

Organized medicine in Hawaii includes about half of all the physicians. That 50%, and those doctor-hours, promote benefits enjoyed by all physicians and by all their patients: In the tort reform struggle, in keeping Medicaid patients from being treated as second class citizens, in conducting peer review and upgrading the standards of care, in hospital and nursing home staff work, in helping to educate the students at the UH School of Medicine, in helping to train the housestaff in hospitals, in serving gratis at school sports programs and so on and on ad infinitum.

At recent HMA Council and at Board of Governor's meetings, those of us who are in the know are pained to be told that income from dues is expected to drop by up to $10,000 this year because of a drop in membership. The message is loud and clear, coming from physicians who are dropping out and who have never joined: "Thanks, but no thanks, to those of the lifters."

Times are hard, we know. Physicians' overhead costs have risen greatly and cannot be matched by fees that are capped by regulation, but just think: If our membership could be doubled, our dues could be halved!

J.I. Frederick Reppun, MD
Editor

. . . a "chilling effect"

U.S. Supreme Court ruling on Medical Peer Review

Counsel to the HMA, Vernon Y.T. Woo Esq., has obtained an amended copy from the AMA of the Board of Trustees Report MMM promulgated in response to the U.S. Supreme Court ruling on Medical Peer Review that has a "chilling effect" on the whole system of traditional peer review. Attorney Woo has given us a copy. The Conclusion of the Report is as follows:

"The Board of Trustees [of the AMA] recommends that:

1. Hospitals, medical staffs and peer reviewers be urged to review the guidelines for the conduct of peer review contained in the Health Care Quality Improvement Act of 1986 and to observe the guidelines set forth by the AMA Committee on Medicolegal Problems in this report.
2. State medical associations be urged to investigate the applicable statutes in their states to determine if additional state agency supervision of peer review is needed to meet the active state supervision requirement set forth by the Supreme Court.

"The AMA will develop legislative approaches that may be considered by the states in reviewing legislation to establish the state action exemption from the federal antitrust laws for peer review."

In *Patrick vs. Burget,* the Supreme Court affirmed a $2.2 million antitrust verdict against physicians who allegedly misused the peer review process, in order to eliminate a competitor.

We feel that HMA members, in fact all of the physicians in active practice in Hawaii, need to heed the recommendations of the AMA reprinted on the following pages. We in the profession feel obligated to serve our patients to the best of our abilities. This includes policing our midst in order to give our patients confidence that each and every one of us maintain the highest standards of quality of care, as a whole profession.

(Continued on page 490)

How to Conduct Safe Peer Review

The medical profession has no alternative but to conduct meaningful peer review with utmost vigilance for the protection of consumers of health care and to minimize the incidence of malpractice claims. At the same time, there is a need to observe certain fundamentals in the conduct of peer review proceedings and hearings to assure "safe" peer review. The courts are open to everyone and the possibility will always exist that an incompetent physician who is deprived of clinical privileges, and who can afford the cost, may indulge himself in litigation to impose costs upon peer reviewers even though he knows that his chances of success are negligible.

The observance of reasonable guidelines in the conduct of a peer review disciplinary hearing generally should discourage unwarranted litigation, or be helpful in terminating litigation in its early stages by summary judgment, thereby avoiding a full trial.

Comprehensive guidelines for the conduct of peer review are contained in the Health Care Quality Improvement Act of 1986. It is not necessary to follow those guidelines to the letter in order to have fair procedures. The guidelines provide a good framework. The Committee on Medicolegal Problems believes that hospitals, medical staffs, and peer reviewers should observe the following guidelines:

1. In any situation where it appears that a disciplinary proceedings may be instigated against a physician that could result in the substantial loss or termination of the physician's clinical privileges, the advice and guidance of legal counsel should be sought by those persons who are involved in this phase of the peer review process. The attorney's participation should continue in preparation for the hearing including the written notice of charges, the marshalling of evidence and the facts and in the selection of witnesses. The attorney should be instructed that his role is not that of a prosecutor, but as an advisor in assuring that the proceedings are conducted fairly, bearing in mind the objectives of protecting consumers of health care and the physician involved against false or exaggerated charges.

2. The attorney advising the hearing panel and the attorney representing the physician involved should be accorded reasonable latitude in cross-examination, but acrimony should not be allowed by the hearing panel.

3. Substantial latitude should be permitted in the presentation of evidence, medical reference works and testimony, within reasonable time constraints and the discretion of the hearing panel.

4. A court reporter should be present to make a verbatim transcript of the hearing which should be available to the parties

and the costs to be met by the hospital or health care entity and the physician.

5. Within the discretion of the hearing panel, witnesses may be requested to testify under oath.

6. The hearing panel should consist of physicians, none of whom are direct economic competitors with the physician involved or who stand to gain through a recommendation or decision adverse to the physician. It is desirable that members of the hearing panel be physicians who have the respect of the medical community, but they need not be in the same specialty as the physician involved.

7. Physicians who are direct economic competitors of the physician involved may testify as witnesses, whether they are called by the physician or the hearing panel or the hospital, but a physician should not be deprived of his privileges solely on the basis of medical testimony by economic competitors. In any proceedings that result in the termination of privileges, there should be testimony from one or more physicians who are not economic competitors or who do not stand to gain economically by an adverse action, but who are knowledgeable in the treatment, patient care management and areas of medical practice or judgment upon which the adverse action is based.

8. When investigation indicates that a disciplinary proceedings is warranted for the purpose of terminating a physician's hospital privileges, he should not be permitted to resign without a finding that his termination occurred without cause. The disciplinary proceedings should be conducted by the hearing panel with the presentation of testimony and evidence, irrespective of whether the physician involved chooses not to be present.

Conclusion

The Board of Trustees recommends that:

1. Hospitals, medical staffs, and peer reviewers be urged to review the guidelines for the conduct of peer review contained in the Health Care Quality Improvement Act of 1986 and to observe the guidelines set forth by the AMA Committee on Medicolegal Problems in this report.

2. State medical associations be urged to investigate the applicable statutes in their states to determine if additional state agency supervision of peer review is needed to meet the active state supervision requirement set forth by the Supreme Court.

The AMA will develop legislative approaches that may be considered by the states in reviewing legislation to establish the state action exemption from the federal antitrust laws for peer review.

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HMA Committee Reports

From the Chronic Illness and Aging Committee

"AVOID ABUSE! Who neglects or abuses the elderly? Typically, the victim is abused by a relative — the child (21%), the spouse (12%), or other relative (15%). Only 10% are abused by a professional care-giver. Abusers are as likely to be women as men."

This was some of the discouraging news presented to the June meeting of HMA's **Chronic Illness and Aging Committee.** These findings were the results of a survey conducted in the fall of 1987 — a joint project of the Community Elder Abuse and Neglect Task Force (CEAN), the Junior League of Honolulu, and the Child and Family Service. The data were presented to the Committee by Nicki Sertich and Shirley Kidani of the latter two agencies respectively. The significance of the survey was assured because of its development by the CEAN Research Committee assisted by the SMS Research & Marketing Services Inc. The data will be made available to the community-at-large in February 1989.

Of 2,500 questionnaires distributed to health, social service and law enforcement personnel, over 600, or about 25%, were returned. The survey clearly showed that elder abuse and neglect occur in Hawaii and that under-reporting is a problem. Only about half of those who had seen abuse or neglect of elderly victims reported it. There were a number of barriers to reporting, the most important being the victim's fear or shame (51%) while 43% had limited mental capacity, 46% lacked awareness of reporting procedures, 26% feared retaliation and 34% perceived a lack of appropriate services for victims. It was saddening to learn that 35% just didn't want to get involved.

There was considerable question as to whether current services for victims are adequate. Over half did not know enough to rate the current services, but there was expressed need for emergency shelters, foster homes, alternative housing, respite services to care-givers, medi-

(Continued on page 502)



Styx and sticks...

In your Editorial, "Observation," in the August issue of the JOURNAL, you wrote, "...even observation by physicians willing to come out to the styx." Some of the few who read my original article asked me whether that was some archaic British spelling.

It is not! It is quite possible that you intended a closely held Harvard pun, imputing that those willing come out to such far-off places as Kailua were ready to give Charon his coin to ferry their bodies over the Styx to the next world. In the Oxford sense, we would have said, "...out to the sticks." This has a venerable history in the sense of meaning a wooded area, and hence, obviously, in contrast to a central metropolitan environment, meaning a rural area almost devoid, even, of crofters' cottages!

Certain research has led me to the conclusion that you may have erred. Longman's Dictionary, under the heading of "In the sticks," defines this as "a country area far from the modern life."* Please be careful, for this has cost me several hours of my time to unravel!

John W. Pearson, MD

*Longman Dictionary of Contemporary English, Ed.-in-chief, P. Proctor: Harlow [England]: Longman, 1978.

The editor replies:

Anaesthesiologists and pathologists always have the last word! Mea culpa.

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A Rotation in a Japanese Hospital

Marianne Ginoza, MD

Introduction

The University of Hawaii Integrated Medical Residency Program is pleased to have Dr. Ginoza submit this paper for publication in the JOURNAL. Dr. Ginoza was a level 3 resident physician in Internal Medicine and has since completed her training.

Irwin I. Schatz, MD
Program Director

As far back as I can remember, I had always had an intense interest in Japan, its people and its culture. I retained this strong attachment, so that during my medical school and internal medicine residency training at the University of Hawaii I had always wondered what it would be like to train and practice in a Japanese hospital. During my last year of internal medicine residency, I was delighted to learn that there was an opportunity to do a one-month rotation at Chubu Hospital in Okinawa, Japan, paid for by that hospital!

I had not realized that Chubu Hospital is unique; in the late 1960s it had developed a strong relationship with the University of Hawaii School of Medicine, because there was a desire to provide "American-style" residency training in a Japanese hospital. As far as I know, this is the only hospital in Japan in which such training is available. Accordingly, posts for Japanese nationals in the Chubu Hospital Residency Program are highly competitive and very difficult to obtain for young Japanese physicians. Each must be bilingual (Japanese and English), and must pass a very tough entrance examination before being considered for the residency program. During the early years of the affiliation with the University of Hawaii, most of the subspecialists on the faculty were Americans who stayed at Chubu for a year or two in order to provide much needed expertise in teaching and patient care. This is no longer true, however, in that each of the subspecialties in internal medicine are now being supervised by superbly trained Japanese physicians, many of whom had their training in the United States.

Nevertheless, the relationship with the University of Hawaii continues. In fact, I was surprised and delighted to find large signs indicating that this was the University of Hawaii Residency Program at Chubu Hospital. There was obvious pride among the Japanese staff and residents about their strong relationship with our University.

My time was spent on the medical wards, primarily as an observer, and during that period a number of things impressed me greatly. Perhaps most compelling was the atmosphere in which hospital medicine was practiced. There were virtually no concerns with malpractice or DRGs. Diagnostic tests were ordered as needed and not in any kind of defensive or reflex manner. The duration of hospitalization was determined after due consideration of the "whole" person; the combined social as well as medical needs of the patient were taken into account before a decision about discharge was made. Only for major interventions were consent forms necessary. This reflected a physician-patient relationship that consisted of trust, respect, and "quiet obedience." In fact, it was rare to see an abusive or manipulative patient.

I did not realize how important the role of the family was in the nursing care of the patient. On the general medical ward, they frequently recorded the intake and output, fed the patient, and encouraged and comforted their relative. It was not unusual for family members of one patient to help a neighboring patient if such was required.

The attitude towards cancer, however, was quite disconcerting. It was customary to withhold informing the patient of a diagnosis of cancer. Only the family members would be told, and, in general, it was felt that a patient would lose his will to live if a diagnosis of cancer was made known to him or her. I found, that as a result of this custom, it was difficult for the physicians to manage the patient adequately, particularly in terms of explaining the reasons for the planned therapy.

Most community hospitals (and in fact some university hospitals) in Japan do not have 24-hour emergency room services. I had always assumed that such were available anywhere in a major town or city. Fortunately, Chubu Hospital, in additon to being a referral center, had a 24-hour emergency room and it was therefore an extremely busy and fascinating institution in which to work. The spectrum of diseases I encountered was remarkable.

The third year of internal medicine training was generally devoted to subspecialty. For instance, the third-year residents on the GI service were fully trained in endoscopic procedures, as well as in abdominal ultrasound and gastrointestinal radiology. What was surprising was the cost of upper gastrointestinal endoscopy. The charge was approximately 10,000 yen, or approximately $80! It is not unusual for such endoscopies to be done very frequently on patients with GI disease.

I found this experience to be enriching, broadening and memorable. It taught me that there were many ways to practice medicine, and that there was much that we as Americans could learn from those who practice in a somewhat different style and culture.



Over the Editor's Desk

STEPHEN R.P.K. BRADY, MD

NEUROLOGISTS ADOPT STANCE ON PVS TREATMENT *(from Society for the Right to Die Newsletter)*–On April 21, the Executive Board of the American Academy of Neurology, which is empowered to speak for its some 10,000 members, unanimously adopted a position paper concerning life-sustaining treatment for patients in a persistent vegetative state (PVS). Among its most salient points:

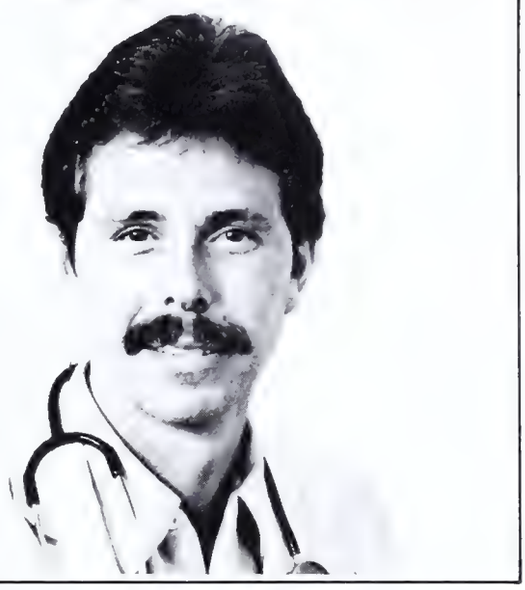
- Patients in a persistent vegetative state do not have the capacity to experience pain or suffering.
- The artificial provision of nutrition and hydration is a form of medical treatment and may be discontinued in accordance with the principles and practices governing the withholding and withdrawal of other forms of medical treatment.
- A diagnosis of "permanent unconsciousness" (of which persistent vegetative state is a subcategory) can usually be made with a high degree of medical certainty after a period of one to three months in cases where the vegetative state is caused by lack of blood or oxygen to the brain due to cardiac or respiratory arrest. (In cases of head trauma, however, more time is usually needed to establish a clear diagnosis.)
- Once the PVS diagnosis has been clearly established, medical treatment in general, including artificial feeding, provides no benefit to those patients.
- While the moral and ethical views of health care providers deserve recognition, they are secondary to the patient's and family's continuing right to grant or refuse consent for life-sustaining treatment.
- Although it is good medical practice to initiate artificial feeding when the patient's prognosis is uncertain, there is no ethical or medical distinction between withdrawing treatment and withholding it.

The AAN position paper has wide-ranging implications. It establishes guidance for neurologists who are involved in the diagnosis and prognosis of patients, and therefore will help to resolve treatment dilemmas within the

(Continued on page 497)

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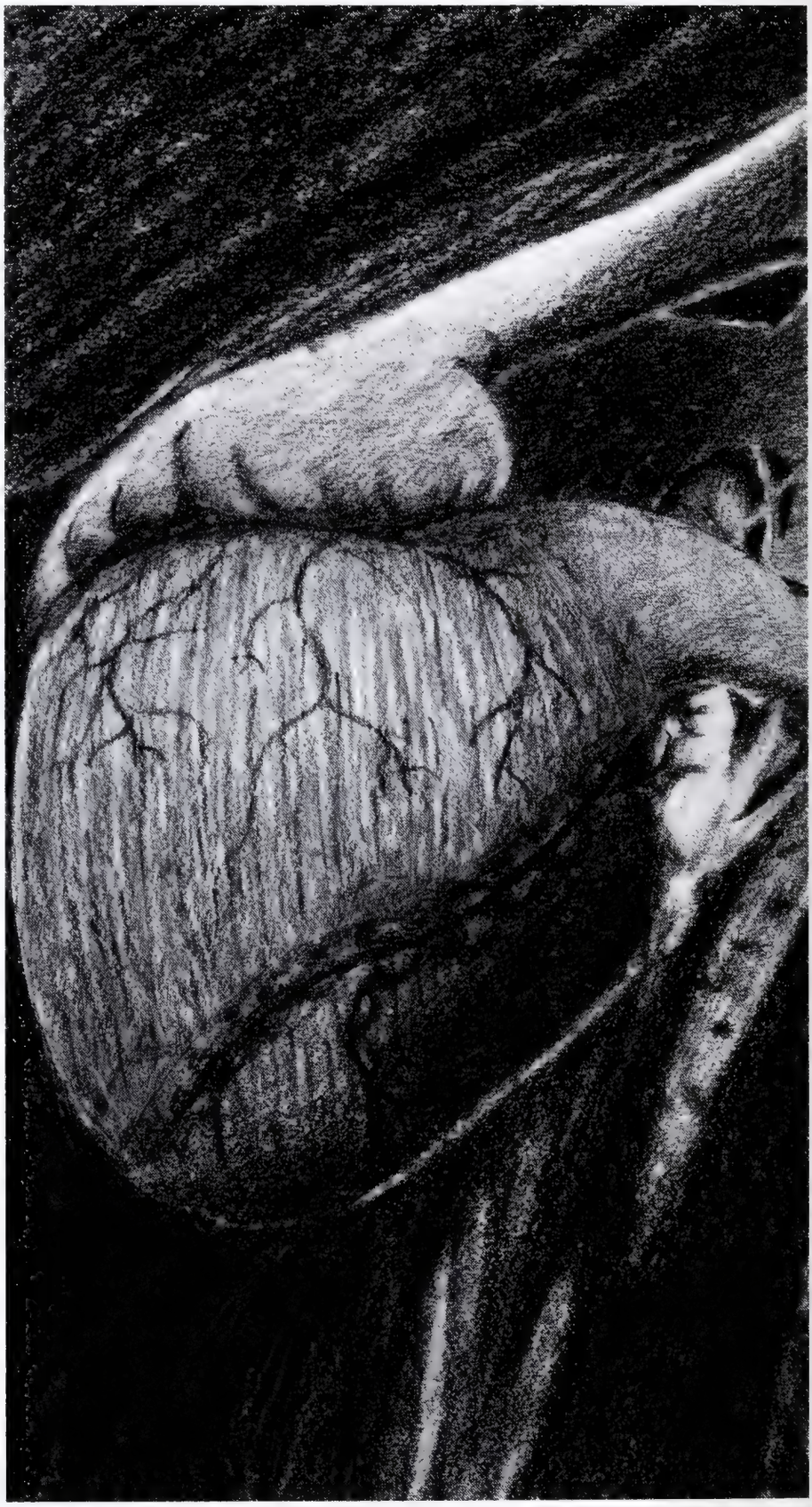
Basically a vaso-constrictor, cocaine is the stuff of seizures and heart attacks.

It can happen in the young, healthy body. It can happen to the first-time user. It can happen with minimal amounts of the drug.

Needless to say, those with congenital health problems, known or hidden are more vulnerable still.

Of course, some people will use cocaine despite these risks (or perhaps because of them). But for anyone with a little common sense, the evidence is hard to ignore.

If you have friends or family who use cocaine, give them a rough time. Because, if you don't it's certain the drug will.



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OTED *(Continued from page 495)*

family-patient-physician context without judicial intervention. It will also be influential in artificial feeding cases currently before the courts in several states. (It has already been introduced into evidence in at least one such PVS case. Copies of the complete five-page statement are available from the society for the Right to Die. (Another helpful resource clarifying confusions about the medical facts of PVS is an article by neurologist Ronald Cranford in the February/March 1988 *Hastings Center Report*.)

ASSESSMENT PROGRAM IMPROVES NURSES' ORIENTATION AND TRAINING AT QUEEN'S–Performance Based Development System (PBDS) is the latest innovation in hospital nursing management and education programs.

PBDS is an assessment program used as part of the hospital's nurse orientation program. It identifies a nurse's capabilities in technical, interpersonal relations and critical thinking skills.

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Queen's is one of 40 hospitals nationwide to adopt PBDS. Each PBDS program is designed to fit the needs of the participating hospital. The program was introduced in 1985 by Baxter Healthcare of California and initially developed by Dorothy Del Bueno, RN, EdD, assistant dean at the University of Pennsylvania School of Nursing.

"The fact that PBDS is based on performance criteria and simulates situations occurring in a particular hospital is important," says Del Bueno. "It offers the opportunity to assess a nurse's abilities in a realistic situation."

Benefits of PBDS include cost and time savings in training and education, performance-based assessment and evaluation, flexibility in staff assignment, improved self-confidence of new and incumbent nurses, assisting in nurse recruitment and retention, and targeted training in areas most hit by the nursing shortage.

"With the nursing shortage, nurse orientation and training are focused on the specific needs of the nurse and the hospital," says Duane Walker, vice president of Patient Services. "PBDS will help in both areas by developing the nurse's competence to perform on the unit and by building the nurse's self-confidence through an individualized training program."

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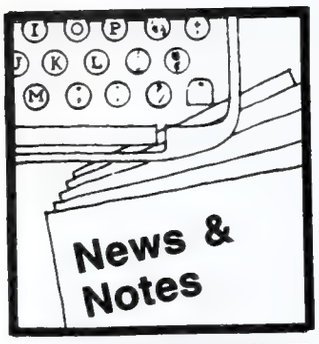
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HENRY YOKOYAMA, MD

Life in These Parts

Our favorite poet is back . . . His handiwork shows at the corner of McCully and Beretania . . . The Hawaiian Rent-All sign recently read: "Cut the boozin' . . . When summer cruisin' . . ."

MAUI JONES . . . In the wake of the Aloha Airlines disaster, Honolulu Advertiser writer Vickie Ong admiringly calls Maui Memorial emergency services director, Charles Mitchell, MD, "Maui Jones." Charles was called in that fateful Thursday afternoon as he was about to go jogging . . .

He directed the triage in Nikes and white sweatpants with fellow physicians, Jon Weisel and Alan Spain . . . Thirty-five physicians, 56 RNs and 45 volunteers treated the 61 injured from Aloha Flight 243 . . .

Retired Hana physician Milton Howell reminisced about Charles Augusta Lindbergh's final days . . . In August 1974 Lindbergh with terminal lymphocytic cancer called from Columbia Hospital in New York City . . . "I want to come home . . . I'd rather live one day on Maui than one year in this hospital in this city . . . I don't want any heroics . . . I know I'm going to die . . . I want to die in peace and comfort." The hospice concept had not been formally organized as yet, but Lindbergh and others had found comfort in living out their final days surrounded by family and friends . . .

The No Name Clinic

The Queen Emma Clinic treats AIDS and ARC patients on Wednesdays between 9 a.m. and noon. Some contend that the clinic, caught up in medical politics, is called "No Name Clinic" because it is not sanctioned by Queen's . . .

Max Botticelli, clinic director, says "That's not so." He dubbed it "No Name Clinic" because "HIV Clinic" would put a stigma on those seeking help. Re: allegations that the QMC board of directors rejected a proposal to support the clinic, Max says, "They did *not* tell us to stop doing what we're doing."

A UH School of Medicine graduate practicing on Majuro reported that mannitol injections can permanently banish all effects of ciguatera poisoning. Irwin Schatz, co-author of the paper on the antidote, says that mannitol is inexpensive, is available everywhere, and is commonly used to reduce brain swelling. It seems that two comatose Marshallese being medivaced were given mannitol injections by a Luis Jain and within 10 minutes both patients were conscious, sitting up and talking. Within 48 hours they had recovered completely . . . call it serendipity . . .

Barbra Beaven of Hilo is the proud owner of grand champion Illawong Tachobrune of Honolii, a chestnut oriental spotted tabby male that was declared the "Best Cat in Show" at the Afook-Chinen Civic Auditorium during the recent Cat Fanciers Association show . . .

Birendra Singh Huja is concerned about a new immigration bill (S-1611-87) that limits the number of spouses and minor children of U.S. citizens entering the U.S. each year. Presently, immediate relatives are not limited. Birendra says, "We all know that the family is the building block of this great society of immigrants. We should do everything within the framework of law and civil rights to defeat such destructive and discriminating laws."

The Kona Hospital medical staff of 45 physicians signed an open letter to the health department. The staff, tiring of being ignored, wants the DOH to act immediately on CAT scan room renovations, increasing the permanent nursing staff, replacing old X-ray and OR equipment, fulfilling equipment requests and implementing hospital renovations projects that could free more patient rooms and improve present service areas . . .

Sportsmen

Ann Landers: Preferring 'Fore!' play . . .

Dear Ann Landers: This came across my desk at work today. I'm sorry I don't know where it came from or who wrote it, but I thought your readers might find it interesting and controversial —Your Avid Fan Up North

Dear Avid: It is both interesting and controversial. My comment will come later. Thanks for sending it.

Sex or Sports

A recent survey asked men to choose between sex or their favorite athletic activity. The results were an education, to say the least.

Would you believe that sex came in second with golfers? More golfers said that they would gladly forgo the pleasures of the flesh for the joy of their favorite sport. What's more, the golfers were most adamant in defending their choice.

One golfer's view: Five hours on 150 acres of perfectly manicured turf, breathing fresh air, experiencing the excitement of pars and birdies with my best friends. Compare that to five minutes of subpar lovemaking with 150 pounds of a not-so-well-groomed woman who constantly complains about my income and lack of understanding. While playing golf, your partners give you praise and encouragement, even when you are not performing well. I don't remember this ever happening in the bedroom.

Dear Avid: Whoever composed that little wife-bashing essay must be several strokes under par. If his golf game was as unsatisfactory as his marriage appears to be, I'm sure he would get some guidance from a pro. I recommend that he give his marriage at least equal treatment.

Ed. Thanks to the colleague with the illegible signature who adds: P.S. I agree with Ann Landers. With sex, you don't need to see a pro for lessons; in fact you don't have to have a low handicap or have to be good at it to enjoy sex.

Oncology Dialogue

A 20-year-old woman had esophagectomy with primary anastamosis for leiosarcoma of the esophagus by surgeon S.K. Liao . . . Moderator Glenn Kokame had done his homework as usual: "I've looked up the figures for esophageal Ca . . . 91% are squamous, 7% adenocarcinoma and 2% sarcoma . . . 40% are found in the proximal esophagus, 50% in the mid esophagus and 10% in the distal esophagus . . . The treatment of choice is surgery . . . Intrathoracic stomachs have trouble, but stomachs left below the diaphragm do well . . ." Turning to radiotherapist Ed Quinlan, Glenn asked: "Ed, is radiation indicated?" Ed was also informative: "Adequate radiation will require 6,500 rads . . . Unfortunately we have the heart and other mediastinal structures and it will be technically impossible to give such high doses . . ." "Gordon, how about chemotherapy?" Glenn asked . . . Chemotherapist Gordon Nakano was explicit: "In this case, no . . ." "How about laser therapy?" Gastroenterologist Mark Yoshida replied, "Where I trained, the thoracic surgeons treated these cases with laser . . . I heard of one case where the aorta was penetrated and the patient exsanguinated." Radiotherapist Vince Brown added, "I have heard of a case of tracheoesophageal fistula from laser therapy."

(Continued on page 502)

AT LAST.

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A 51-year-old Oriental woman's case history was presented by surgeon S.K. Liao . . . The patient was first seen by Ob-Gyn man Tom Oshiro, who did endometrial biopsies that showed benign polyps . . . The patient had massive ascites. Tom did ultrasounds and CT scans. The ultrasound showed an enlarged uterus . . . One radiologist called the CT scan negative while another detected a mass. Suspicious and persevering Tom did more endometrial biopsies in which pathologist Takushi Hayashi found signet ring cells . . . Endoscopy before abdominal exploration revealed a tumor of the greater curvature, which Takushi confirmed to be adeno CA, diffuse type (formerly called signet ring type) . . . Takushi presented a 1961 series by Grant Stemmerman that showed that mets to the uterus came from the stomach . . . "In menstruating women, uterine mets on the mainland are primary breast cancer, but here in Hawaii, most are from the stomach . . .," Takushi explained.

Honored, Elected, and Appointed

Peripatetic neurosurgeon Ralph Cloward received The Distinguished Alumnus Award from Rush Medical College at its commencement banquet held at the Chicago Hilton in June . . .

Joseph Alma Palma was voted "Doctor of the Year" by nurses and personnel of Castle Medical Center and presented with the award on Doctors' Day, July 22 . . .

Conference Humor from Past Conferences

COPD patient and physician (cartoon): Physician: "Your case isn't serious, Mr. Perkins . . . It's just boring . . . Let's put it this way . . . Your case has given me a whole new outlook on mercy killing."

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Pharmacist to patient (cartoon): Pharmacist: "The drug itself has no side effects . . . But the price may cause dizziness and fainting . . ."

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Instructions to patient: "Take one of these pills one-half hour before you wake up in the morning."

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Re: Physician attitude toward COPD patients: In order to get the patient out of his hair, a Chicago MD recommended a West Coast environment . . . The patient arrived in smoggy San Bernardino and promptly landed in ICU in status asthmaticus . . .

"Doctors' Dilemma"

By Lucy Jokiel, Hawaii Business Magazine, March '88, (excerpts therefrom)

Donn Tokairin: "It creates a lot of paranoia when doctors have to look at patients as potential lawsuits . . . It takes all the fun out of medicine."

Becky Kendro, assistant executive director, HMA: "That's the dilemma doctors face . . . Other business people can pass those costs on to customers. But doctors are unique because their fees are set by others . . . In Hawaii, 85% of the 1,936 actively practicing physicians participate with HMSA; most do business with the newer HMOs and accept CHAMPUS, Medicare and Medicaid patients. That means that 80% of their patients are on fixed reimbursement schedules offering only 1% to 3.5% fee increases annually . . . AMA says one out of every three physicians are sued sometime during his career . . . Ob-Gyn men are at greatest risk with a 64% chance of getting sued . . . Hawaii obstetricians pay $50,000 per year in malpractice premiums, which represent 25% of their annual revenues (Hawaii physicians earn 20% to 25% less than their mainland counterparts)."

Ted Tseu dropped his Ob practice when his malpractice premium jumped 60% to $48,000 per year . . . Ted feels that modern medicine is to blame for the malpractice crisis: "We've oversold the public on miracles . . . Everybody expects to have a perfect baby . . . But there's no such thing . . . About 2% to 3% will have defects and a doctor's performance during the course of delivery cannot alter these largely inherited defects . . . Yet time and time again, if it's a 'bad' baby, we are held liable."

Rodman Miller of Haleiwa, whose malpractice premium has spiraled to $50,000 (though he has never been sued in his 38 years of practice) feels that, "If economic pressures force us to give up the things we're trained to do — like obstetrics — we become frustrated. In the long run, highly motivated and enthusiastic doctors will be discouraged from becoming family physicians."

Becky Kendro: "The solo physicians are in jeopardy . . . They are being swallowed up by large groups practicing corporate medicine . . . I hate to see that happen because there is so much to be said about neighborhood doctors . . ." Becky predicts that "if the trend continues, Hawaii's current standard of excellent health care (first in longevity of residents and lowest in utilization of hospital beds) will be seriously compromised."

What *Not* to Name Your Dog!

(We understand that this originally came from a "Dear Abby" column.)

Everybody who has a dog calls him "Rover" or "Boy." I call mine "Sex." He's a great pal but he has caused me a great deal of embarrassment. When I went to City Hall to renew his dog license, I told the clerk I would like a license for Sex. He said, "I'd like one, too!" Then I said, "But this is a dog." He said he didn't care what she looked like. I said, "You don't understand, I've had Sex since I was 9 years old." He winked and said, "You must have been quite a kid."

When I got married and went on my honeymoon, I took the dog with me. I told the motel clerk that I wanted a room for my wife and me and a special room for Sex. He said, "You don't need a special room. As long as you pay your bill, we don't care what you do." I said, "Look, you don't seem to understand, Sex keeps me awake at night." The clerk said, "Funny, I have the same problem."

When my wife and I separated, we went to court to fight for custody of the dog. I said, "Your Honor, I had Sex before I was married." The judge said, "The courtroom is not a confessional. Stick to the case, please."

Last night Sex ran away. I spent hours looking around town for him. A cop came over to me and asked, "What are you doing in this alley at 4 o'clock in the morning?" I told him that I was looking for Sex. My case comes up on Friday. In spite of all this, Sex is still man's best friend!

COMMITTEE REPORTS

(Continued from page 492)

cal assistance, counseling and others. Lack of education as well as lack of awareness of the abuse and neglect problem were also subjects of concern. It is the latter to which CEAN will now devote its major efforts. This year's work will be directed to informing the general public about the problem through a Speaker's Bureau, programs in churches, schools, senior groups and some focus will be directed to the non-professional care-giver. All of this needs the help of the physician community.

Sam Allison, MD
Committee member

MRI CASE OF THE MONTH

PONTOCEREBELLAR ATROPHY

Clinical Information: The patient is a 66-year old male with progressive cerebellar ataxia on the left side. CT scan showed only cerebral atrophy.

Image 1

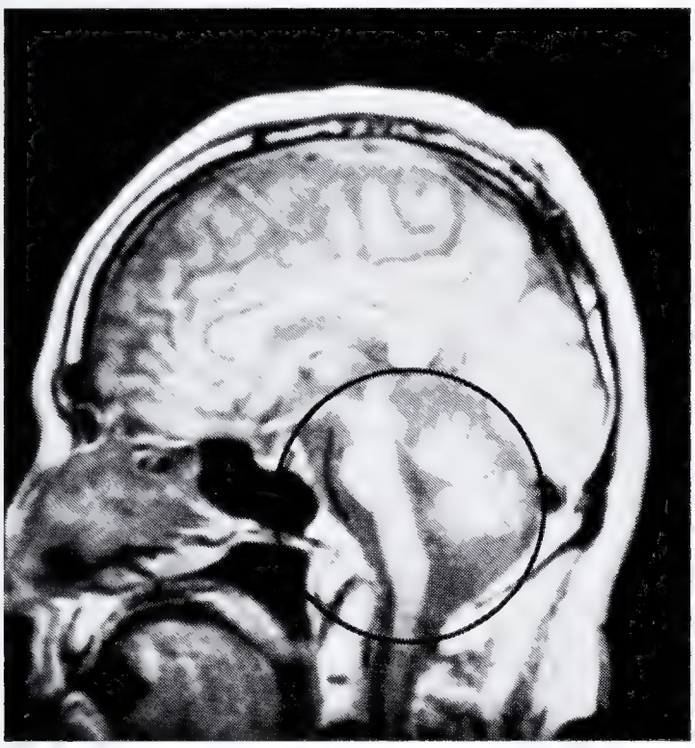


Image 2



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: Image 1 is a sagittal image through the brain. This demonstrates considerable atrophy of the brainstem, chiefly the basis points, as well as the vermis of the cerebellum. There is also noted some atrophy involving the body of the corpus callosum. Image 2 is an aged matched normal brainstem for comparison.

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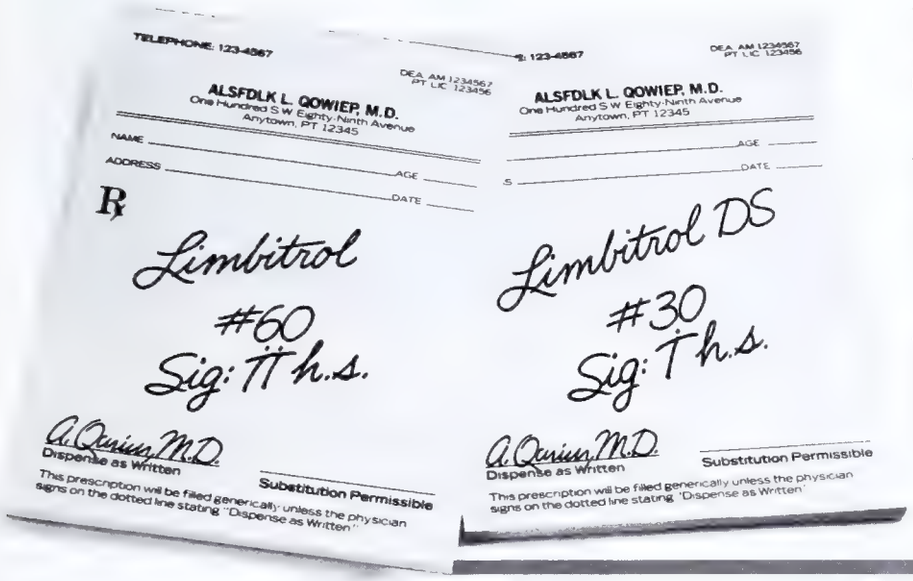
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Before prescribing, please consult complete product information, a summary of which follows:
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.
Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).
Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**
Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).
Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady - state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.
Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.
Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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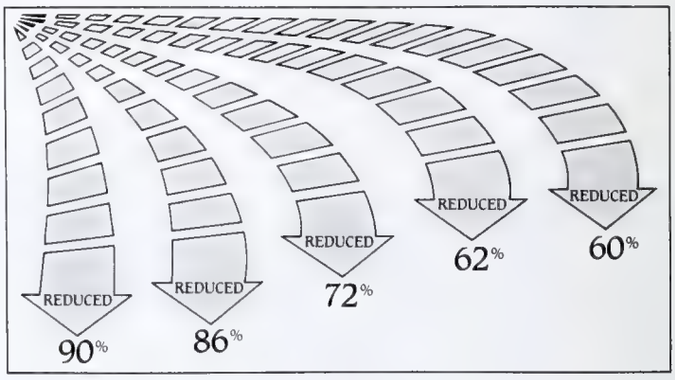
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- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

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Infectious diseases: AIDS

In this special issue devoted to infectious diseases, under "issue editor" Francis Pien, it is not surprising that the major emphasis is on AIDS. It has been called "the epidemic of this century."

Vital Speeches of the Day is a periodical by subscription, published by City News Publishing Co. (Inc. 1911) of Mount Pleasant, South Carolina, that believes: ". . . the important addresses of the recognized leaders of public opinion constitute the best expression of contemporary thought in America." Vol. LIV, No. 8, pp. 252-256 contains the address by David Pence, MD, to physicians and community leaders of Grand Rapids, Michigan, on November 4, 1987, titled "The AIDS Epidemic: Paradox and purpose in public health policy."

We think Dr. Pence's approach is provocative; it is lucidly presented and worthy of our readers' careful consideration. We have excerpted liberally from the speech:

". . . policies must be based on the application of traditional public health measures formulated over the past century to prevent the transmission of incurable infectious diseases. . . .

"While the problem of AIDS knows no boundaries, its solution lies in the exercise of public health enforcement and policing functions which, by their nature, are limited to local territorial jurisdictions."

Pence then describes three paradoxes:

The first one is that "the communities that have the highest incidence of the disease have been the most reluctant to apply stringent public health measures to prevent its transmission."

The second paradox is "the labeling of legitimate concerns of health workers, physicians, parents and political leaders as 'AIDS hysteria' . . . . Individuals who have advocated traditional public health measures have been derided as fascistic, 'right wing' and 'homophobic.' "

The third paradox is "that the individuals most harmed by governmental inaction are those engaged in homosexual activity and i.v. drug use."

Pence goes on to say that the basic principle of public health policy is that an infectious disease that cannot be cured can only be controlled by interrupting its transmission, (a) by case finding, (b) the tracing of contacts, (c) the determination of carriers, and their isolation if they do not comply with cease and desist orders, and (d) "the closing of public establishments which foster the activity by which the disease is spread. . . . It is important to understand that, for purposes of public health policy, rules and regulations must apply to all carriers of the virus, and not simply those who have the end-stage disease. . . . Unfortunately, the 'epidemic of the century' has been granted a peculiar immunity from the protective measures of standard public health practice."

Pence focuses on the anonymity issue: "Confidential testing means the results are known only to the patient, his doctor and public health officials (and the staff people of the latter two entities, which means that confidentiality is already broken!/Ed) . . . . Anonymous testing means a person is tested without giving his name, a practice unique to HIV infection . . . the nameless carrier of the virus thus is granted total discretion in warning his sexual contacts and desisting from the behavior which spreads the disease . . . a behavior that is known to be addictive and compulsive."

Pence waxes eloquent in delving into the philosophical bases for our current "failure to address the problem of AIDS properly," but it would be best for the gentle reader to "go to the source" and enjoy the full text and its language.

J.I. Frederick Reppun, MD
Editor

AIDS affects all

AIDS is a disease that has hit Hawaii "full force." As indicated in the article by Drs. Catherine Bender, Erlaine Bello, and Michael Nagoshi, most of our State's cases have occurred in a predominantly young, male, gay population, although we have begun to note a gradual increase in female and pediatric patients. As these authors note in this issue, there is a major need for integrated outpatient facilities for the management of HIV-infected patients. Dr. David B. McEwan has nicely summarized the current community resources available for AIDS. Of particular interest to me is the further involvement of our local religious groups as caring communities for AIDS patients.

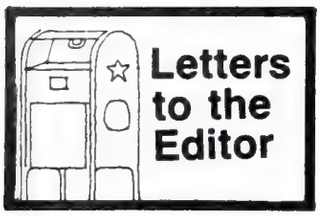
Also in this issue, Dr. Cyril Goshima has highlighted many of the legal, political, socio-economic and medical issues in the care of HIV patients. Hopefully, our State will develop a strong, rational, community AIDS program rather than responding to unwarranted fear or outside political pressures.

AIDS is a viral disease that attacks all body systems, including brain, lungs, bone marrow, liver, and gastrointestinal tract. Drs. Nagoshi and Osamu Fukuyama describe an interesting case of cardiac cardiomyopathy due to AIDS.

AIDS has been called the No. 1 health problem facing America because of the possibility of, perhaps, 5 million deaths occurring from this disease in the next 25 years, mostly in the younger age groups. This disease will eventually affect all physicians, hospitals and many families in our State, as well as government and social institutions. It is sincerely hoped that this JOURNAL issue will assist physicians in better understanding AIDS and its management.

Francis D. Pien, MD
Special issue editor

(Continued on page 515)



Thank you for the complimentary copy of the September issue of the HAWAII MEDICAL JOURNAL this past week. I had just returned from the Surgeon General's Campaign '88 Conference in Washington, D.C., where we presented the "Hawaii model" on the "medical home." This September issue of our article is most apropos.

I do want to thank you for your most generous remarks on my behalf. The remarks and comments "Every Child is Entitled to Good Health" are most kind and deeply appreciated. I know that my father would have been very happy to read about this!

The one minor correction for your records is that I am the delegate of the American Academy of Pediatrics to the American Medical Association and also the chairman of the American Medical Association Section Council on Pediatrics. This allows me to be actively involved with *all* pediatricians in organized medicine nationally; i.e. in specialty society (AAP) or medical societies (AMA).

My other "claim to fame," legislativewise, is that I initiated a bill in Congress through Sen. Dan Inouye that has successfully evolved a system of care for Pediatric Emergency Medical Services. We currently have 12 states in the nation developing demonstration grants for Emergency Medical Services for Children. Hawaii has one of such grants; but this calls for another article to the JOURNAL!

Calvin C.J. Sia, MD



Allan R. Kunimoto, MD
1989 HMA President

Allan R. Kunimoto, MD, Honolulu ophthalmologist in private practice since 1971, was chosen HMA President-Elect after holding the office of treasurer for two years.

Active in organized medicine, Dr. Kunimoto has been president, president-elect, secretary, and treasurer of the Honolulu County Medical Society; a member of the American Medical Association; president of HAMPAC (Hawaii Medical Political Action Committee); a member of the Board of Directors of the HMA Development Company; and chairman of the HMA Building Committee.

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Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

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Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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COUNCIL CAPERS

September 16, 1988

MEMORIES: Only one year ago, the HMA Council met for the last time at the office building on Ward Avenue. Last Friday night, the Council met again at our new building on Beretania Street to discuss the important issues, prior to the House of Delegates meeting in October.

IMUA . . . After a delicious Hawaiian buffet dinner, Dr. Richard Blaisdell eloquently discussed the plight of the native Hawaiian health, citing that since 1910, the Hawaiians have had a shorter life expectancy, compared to non-Hawaiians. In *1980*, the life expectancy of the Hawaiians was 69 years compared to 75 years for non-Hawaiians. The population of the Hawaiians in 1778 was 1 million, compared to 8,000 pure Hawaiians and 199,000 part-Hawaiians as of 1985. The Hawaiian people lead the list in disease category predominance including, infant mortality rates. An exerted effort should be placed to recognize the health problems of the native Hawaiians, with prompt and effective solutions aimed to improve this most distressing trend.

FIRE - FIRE . . . It is *very* disturbing that the HMA membership is decreasing, with the deliquency of dues continuing to be alarming! Your Medical Association is very important to each one of us in promoting our most cherished profession. The amount of work that the HMA undertakes for the medical profession, for each one of us, is beyond tallying, and is a benefit to *ALL* of us. I wonder how many non-members belong to some exclusive country club with large initiation fees and dues, yet cannot afford to join the Hawaii Medical Association because of the dues cost? Nuff said!

KUDOS . . . With grateful appreciation, James Lumeng was honored with kind words for his superb leadership for the past year as President of the HMA, leading it through some rocky situations.

Alohappreciation . . . William Iaconetti was recognized for his many years of dedicated hard work as a Delegate to the AMA.

Moola-Moola . . . A tedious and detailed effort was spent perusing each line item of the HMA financial statement and projected budget for the coming year. Believe me, your Council and officers have been most diligent and considerate of our treasury fund, which continues to be more than adequate.

Tips of the Month . . . Did you know that the Royal Garden Restaurant at the Ala Moana Hotel is one of the better Chinese restaurants in town? Try it.

If you have not read Kevin Leman's *Birth Order*, please do, it is fascinating.

Denis J. Fu, MD
Councillor

EDITORIALS *(Continued from page 511)*

The plight of native Hawaiians

Our own Richard Kekuni Blaisdell, Professor of Medicine at the University of Hawaii School of Medicine, hematologist and oncologist at St. Francis Medical Center, head of the Hawaiian Studies Program at the University, was invited to address the Council at its September meeting.

Councillor from Maui and reporter for the JOURNAL, Denis Fu, in his usual inimitable style, gives an account of that meeting in his Council Capers in this issue.

Not to outdo Denis by any means, we would want to add just a bit more to what he reported.

Kekuni reminded us all that the Kamehameha Schools were founded by Bernice Pauahi Bishop with the intent of teaching Hawaiian youth how to become Westernized. The purpose was not to segregate the people of Hawaiian blood, nor to give them special privilege, but to bring them into the current times as participants in the "new" civilization, the white man's Western one. The Princess saw the handwriting on the wall; she foresaw the islands being taken over in their entirety by the newcomers. She wanted her native people to be able to survive and compete on an equal footing.

It hasn't worked out that way. The original School's policy was to "de-Hawaiian" the Hawaiian by not allowing him to speak in his native tongue or be taught in it, by not allowing him to eat poi, etc. The result was a demeaning of the culture.

Perhaps that is why nowadays "Hawaiians are at the bottom of society in our own land," as the Professor put it to us. "Hawaii is not a land of equal opportunity for Hawaiians. Only 5% of the student body at the University are Hawaiian or part-Hawaiian; only 8% in the school of medicine are so classified," he said.

Although we are all moved by the sad tale that Kekuni brought us, his fervent plea: "We want our own sovereignty, and our own lands" fell on unreceptive ears. He had raised the colors of the revolutionary party that our society tolerates affably but does not take seriously.

The Westerners accept the fact that Hawaii was wrongfully "taken" a hundred years ago, but that cannot be reversed; "reparations" cannot be fairly made to third generation progenitors. On the other hand, what the native Hawaiians have given us is "Aloha"–a human-to-human feeling that is a gift beyond compare. This feeling, despite the sad history of Hawaii, still remains in many of the Kupuna, still grows and is manifest in these islands, "this string of pearls in the Pacific," as Robert Louis Stevenson put it. We are hoping that Kekuni and his friends do not forget that gift to us, for which we are ever grateful.

J.I. Frederick Reppun, MD
Editor

AIDS: Issues for physicians

Cyril Goshima, MD*

More than any other disease, Human Immunodeficiency Virus illness (HIV) has a wide-ranging impact on American life. AIDS highlights the weaknesses and needs of our legal, political, economical, social and medical systems. These needs are not unique, but the severity of the illness and the number of patients involved make them more apparent. We care for HIV patients directly, often unaware that we are doing so, or indirectly by caring for the family, friends and lovers who have concerns about HIV infections. Because of this, we need to know some of the broader issues involved. We are becoming like the physicians of old, who knew medical management within the context of the society in which they lived.

The Legal Requirements

Aids Reporting.

AIDS is a reportable illness. However, only those patients newly diagnosed with AIDS need to be reported to the State Department of Health. The Centers for Disease Control (CDC) case definition for AIDS has been expanded to include AIDS Dementia and AIDS Wasting Syndrome. Currently, other manifestations of HIV infection and seropositivity are *not* reportable. The Department of Health statistics do not reflect the number of patients with AIDS that are diagnosed elsewhere, but are being cared for in Hawaii.

Discrimination by Insurance Companies.

Discrimination by an insurance company merely because a person has had an HIV antibody test and has refused to disclose that information is against the law. Currently the Hawaii Insurance Commissioner is looking at instances where HIV Antibody testing is being used by insurance companies discriminately. There is opposition against such "conditional" testing (mandatory or a requirement for employment or for other reasons), because of the limitations, the test, the variability of manifestations of HIV illnesses, and because of continually evolving information regarding the lifecycle of the virus.

Confidentiality of Records.

HIV antibody test results are considered to be confidential. Disclosure of such information without patient consent will result in stiff penalties. Medical Insurance Exchange of California (MIEC), a professional liability insurance company, suggests placing such information in a special place in the chart, and marking the chart in some way to indicate that confidential information is contained in it. Also, it has been suggested that a general release of information is *not* adequate; a specific one for AIDS should be required. Release of medical information for the purpose of receiving reimbursement for services is permitted, provided that patients are given the option to pay privately out of pocket if they do not want such information disclosed to third-party payors. Physicians may give information about HIV status to other physicians for the purpose of continuity of care, however. Information can be released by court order if good cause can be shown. Lastly, it is prohibited to compel a person to release HIV status information for purposes of housing, employment, or education.

Written Informed Consent to Obtain an HIV Antibody Test.

This is required by law, except for blood or organ donation, or when verbal consent is obtained such as at the Department of Health Alternate Test Sites. Unfortunately, some parts of the law can be challenged as equivocal. If a patient is unable to give consent and the patient's physician decides that the test is necessary in order to make a diagnosis or pursue a course of treatment, then testing can be carried out without the patient's consent. However, once that information is obtained the care of the patient cannot be compromised. When the patient is able to receive the test result, then that information must be given to the patient, with appropriate counseling.

Standardization of HIV Testing.

A positive ELISA HIV antibody test must be confirmed by a second ELISA and then reconfirmed by a Western Blot, Immunofluorescent Assay, or Antigen Detection Assay. The Department of Health monitors quality assurance in laboratories in Hawaii.

HIV Antibody Status and Property.

HIV status cannot be considered material fact when it comes to ownership of property. A realtor's license can be revoked for requiring it.

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At every legislative session there are likely to be new AIDS regulations promulgated, such as mandatory HIV antibody testing in various settings, confidentiality and anti-discrimination.

The Role of Physicians

Some states are considering requiring evidence of basic AIDS knowledge for licensure. Physicians need to know if their patients are at risk for HIV infections and therefore sexual and drug histories must be obtained. Review of symptoms may include: "Have you been sexually active in the past 10 years? One partner or more than one? Male and/or female? Do you use protection? Do you feel what you are doing puts you at risk for AIDS? Do you smoke or drink alcohol? Do you use non-prescription "street" drugs. Have you or your partner used intravenous drugs? Do you share needles?" These questions will give the physician information on risk behavior, as well as educate the patient about AIDS.

Obtaining an HIV antibody test is not as simple as ordering other laboratory tests. First, there are laws governing the tests, as described above. Second, the disclosure of the results can be devastating to the patient even when the results are anticipated. The test results can cause significant changes in lifestyle, career aspirations and relationships. Both pre- and post-test counseling must be done. Emotional support must be anticipated and offered with caring. Physicians need to focus on care, since there is no cure at this time.

Difficult Issues Facing Physicians

Refusal of Care.

The American Medical Association feels that a physician can refuse to give care to a patient, but it is his or her responsibility to refer the patient to someone who can give quality care. The American College of Physicians feels that the denial of appropriate care to a patient for any reason is unethical, and that physicians are obligated to provide care to all patients. The reasons a physician might refuse care are important. If they stem from prejudice, a physician in a helping profession must search his or her own conscience. If they stem from a fear of contagion, counseling might help allay those fears.

HIV Antibody Testing.

There are data to suggest that conditional/mandatory testing might drive this disease underground. People are afraid to be tested because of fear of discrimination and stigma, fear of loss of loved ones, fear of a "death sentence" and fear of loss of job, housing and insurance. The most common reason given for a program of more widespread testing is to protect the public health. HIV infection is not spread by casual contact. Consenting high-risk contact is required for its transmission, and, therefore, the public health would be best served by focusing on education. HIV antibody testing can give us valuable information, but the price of getting that information in terms of dollars, people's emotion and potential discrimination, can be high.

Quarantine.

Quarantine is an ineffective way of handling a disease with this mode of transmission. It is also impractical to quarantine over a million people nationwide, since effective quarantine would have to include all persons that are HIV antibody positive as well.

Contact Notification.

It is the patient's responsibility to notify all contacts about HIV antibody status; it is also his or her social duty to do so. The problem arises when the patient refuses to, or does not inform a contact and will continue to engage in high-risk behavior. What is the obligation of the physician in this context?

HIV-Infected Health-care Workers.

Is there a risk to patients cared for by HIV-infected health-care workers? The CDC has some guidelines for these instances. In general, it is a decision that must be worked out by patient and treating physician.

The above issues are complex with no easy answers. In time, the legal system and ethicists will sort out some of them. Physicians can, however, begin to contemplate solutions based on the traditions of medicine. On becoming a physician, certain principles are upheld in the Oath of Hippocrates: "I will respect my patients as individuals. I will endeavor to be my patient's advocate before society and to aid my patients and their families in weighing and making the serious decisions that surround illness and death. Although life is sacred, death is inevitable. I recognize that it is my duty to treat the whole patient. The continued life of the patient's body is one consideration, but I will also consider the impact of treatment on quality of life and psychological well-being in making therapeutic decisions."

Two organizations have been formed in Hawaii at the highest city and state levels to deal with AIDS and HIV infection. The Mayor's Advisory Committee on AIDS was formed in 1985 and published a set of recommendations in August 1986, which encouraged education, anonymous HIV antibody testing, and following CDC guidelines. This committee has not held any further meetings consequent to the forming of the Governor's Committee on AIDS in October 1987. The Governor's Committee has been meeting monthly; its subcommittees have met more frequently. The Committee is hoping to have a preliminary State plan on AIDS by this December. It also hopes to be a body through which coordination of effort in the State can be achieved. Undoubtedly, this committee will continue its function in 1989 and beyond.

REFERENCES

1. The Acquired Immunodeficiency Syndrome (AIDS) and Infection with the Human Immunodeficiency Virus (HIV): Position Papers. Health and Public Policy Committee, American College of Physicians and the Infectious Diseases Society of America. *Ann Intern Med,* 1988; 108: 460-469.
2. Mayo DJ: AIDS, Quarantine, and Non-Complaint Positives. In C Pierce and D Van de Veer. *AIDS: Ethics and Public Policy,* Wadsworth Press, 1987.
3. Confidentiality and the Test (HTLV III Antibody Test). *MIEC Claims Alert,* February 1986, #11.
4. Confronting AIDS, Directions for Public Health, Health Care, and Research. Institute of Medicine, National Academy of Science. *National Academy Press,* 1986.
5. Prevention and Control of Acquired Immunodeficiency Syndrome, an Interim Report, Board of Trustees Report. *JAMA,* 1987; 258: 2097-2103.
6. Myers KB, Paulker SG: Screening for HIV: Can we afford the false-positive rate? *New Eng J Med,* 1987; 317: 238-241.

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HIV infection in a primary-care outpatient clinic

Catherine Bender, MD*
Erlaine Bello, MD**
Michael Nagoshi, MD**

Since the first cases were reported in 1981[1], the number of patients with the acquired immunodeficiency syndrome (AIDS) has grown exponentially. There were almost 80,000 cases of AIDS diagnosed worldwide, 60,000 cases in the United States, and 213 cases in the State of Hawaii as of April 1988[2,3].

Introduction

Patients with AIDS, diagnosed on the basis of specific indicator infections, or with malignancies[4], constitute the smallest subgroup of AIDS-related illnesses. Patients with AIDS-related complex (ARC), who may manifest fever, night sweats, weight loss, oral candidiasis, diarrhea and lymphadenopathy, and those with persistent generalized lymphadenopathy (PGL), represent a larger subpopulation. However, the largest group of patients with HIV infection are serologically positive, but asymptomatic[5]. The State Department of Health has estimated that in Hawaii, in addition to the approximately 1,000 persons who are known to be antibody positive, 5,000 to 6,000 persons are probably infected but unaware of their infection[6]. This group of patients is a potential reservoir for being infectious because of the long incubation period of the illness caused by the human immunodeficiency virus (HIV)[7]. Although it is not certain that all persons infected with the virus will eventually develop AIDS, 5% to 35% of the asymptomatic, seropositive patients do progress to AIDS in two to five years[8-10].

Economic and public health problems continue to increase as the number of HIV-infected persons grows. The cost of hospitalizing a single AIDS patient is high. Optimal outpatient management of patients infected with the virus may help to reduce the health-care costs. Review of the literature reveals a paucity of studies dealing with AIDS in the outpatient setting. We present here the clinical and epidemiologic characteristics of patients with HIV-related illness in a primary-care, outpatient clinic.

Methods

The study was conducted in The Queen's Medical Center-Queen Emma Clinics, an ambulatory care center affiliated with the University of Hawaii, Department of Medicine. A retrospective chart review was performed on HIV seropositive patients seen in clinic from 1981 through December 1987. The patient's age, sex, ethnic background, state residency status, employment status, possible modes of transmission, previous sexually transmitted diseases, abnormalities on physical exam, and selected laboratory data were recorded. Patients were considered Hawaii residents if they resided in the state for 12 months or more prior to the study. Patients were classified as having AIDS by the CDC criteria of August 1987[4]. Patients were classified as having ARC if both of the following conditions were met: (1) Presence of any two of the following symptoms: Fatigue, night sweats, fever (unexplained, greater than 100° F persisting or recurrent for more than seven days), diarrhea (unexplained, persisting or recurrent for more than seven days), lymphadenopathy (unexplained, more than one site, more than three months), weight loss (greater than 10 percent of total body weight); (2) presence of any two of the following laboratory abnormalities: Decreased T-helper cell count, increased serum globulin, anergy. Those patients not meeting either of these criteria were given the diagnosis of Persistent Generalized Lymphadenopathy (PGL) if generalized lymphadenopathy was present.

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Results

Thirty-three patients with HIV seropositivity were identified. There were 30 men and three women. The majority of patients was Caucasian (Table 1). The patients ranged in age from 23 to 52, with a median age of 34 (Table 2). Homosexuality or bisexuality was present in 26 patients and i.v. drug abuse in seven (Table 3). A single patient had a blood transfusion as the only risk factor for HIV infection. The one patient who admitted to prostitution had homosexual contact as well. The risk factors in the three women in the study were high-risk sexual partners in two patients, and i.v. drug abuse in the other. One-third of the patients had two risk factors identified, most commonly homosexuality or bisexuality and i.v. drug abuse. Two patients had no known risk factors. Twenty-one patients had a history of previous sexually transmitted disease (Table 4).

Fifty percent of patients were unemployed. An additional 25% had unknown employment status. Two-thirds were long-time Hawaii residents.

The physicial exam was generally unremarkable except for the presence of lymphadenopathy in about 50% of the patients (Table 5). Nine patients met the CDC criteria for AIDS, 12 were classified as having PGL, and 12 had asymptomatic HIV infection (Table 6). The average total leukocyte count, OKT4/OKT8 ratio, hemoglobin and platelet count were lower in patients with AIDS as compared with asymptomatic patients (Table 7). *Pneumocystis carinii* pneumonia was the most common indicator disease for the diagnosis of AIDS (7 patients). There were one case each of *Candida* esophagitis, Kaposi's sarcoma and cryptococcal meningitis.

TABLE 1:
Ethnicity of HIV Positive Patients Seen at Queen Emma Clinic

Ethnic Group	Number of Patients
Caucasian	22
Filipino	4
Hawaiian-Caucasian	2
Filipino-Caucasian	1
Other	4

TABLE 2:
Age of HIV-Positive Patients Seen at Queen Emma Clinic

Age	Number of Patients
23 - 25	1
26 - 30	9
31 - 35	12
36 - 40	6
41 - 45	3
46 - 50	1
51 +	1

TABLE 3:
Risk Factors of HIV Positive Patients Seen at Queen Emma Clinic

Risk Factors	Number of Patients
Homosexual/Bisexual	26
Intravenous Drug Use	7
From Blood Transfusion	1
Prostitution	1

TABLE 4:
Previous History of Sexually Transmitted Disease

Sexually Transmitted Disease	Number of Patients
Hepatitis	13
Herpes Simplex	8
Condyloma acuminata	8
Syphilis	7
Gonorrhea	3

TABLE 5:
Physical Findings in HIV-Positive Patients

Physical Exam	Normal	Abnormal	Unknown
General	21	10	2
Skin	22	8	3
Lymph Nodes	10	18	5
Fundi	25	1	7
Oropharynx	18	12	4

TABLE 6:
Classification of Serologically Positive Patients

HIV Classification	Number of Patients
Asymptomatic HIV Infection	12
Persistent Generalized Lymphadenopathy	12
AIDS	9

TABLE 7:
Average Hematologic Parameters of HIV Patients

	HGB (gm/dl)	PLT (x1000)	WBC (x1000)	T4/T8 Ratio
Asymptomatic	13.7	271	7.3	0.63
PGL	13.7	230	5.8	0.80
AIDS	11.7	185	3.9	0.32

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Discussion

The epidemiologic analysis of our HIV-infected population does not differ from public health statistics for Hawaii or the rest of the United States, which indicate a predominance of Caucasian men in the 20- to 40-year age group. The major risk factors identified in our study are also consistent with previously published data that show the primary factors to be homosexuality, bisexuality and i.v. drug abuse.

The majority of our patients, although infected with the virus, were asymptomatic. This finding is consistent with the increasing prevalence of HIV seropositivity in apparently healthy people in high-risk groups[11]. There may also be a significant number of asymptomatic patients in high-risk groups not included in our study because of our selection criteria that required HIV antibody positivity.

There is a paucity of studies dealing with the epidemiology and management of AIDS in the general outpatient setting. Most reports have originated from clinics located in areas with a high prevalence of AIDS, and which primarily treat patients with sexually transmitted diseases or patients in high-risk groups. Groopman et al[12] studied 300 homosexual men recruited predominantly from a Boston STD clinic. In that population, 21% were found to be asymptomatic but HIV antibody positive, 27% had PGL and 16% had AIDS. The results of our study are consistent with those findings.

The large number of patients in our study who are Hawaii residents and who are unemployed suggests a potential financial burden on the State's welfare system. By one conservative estimate the average hospital cost per year for an AIDS patient is approximately $20,000[13]. If the 24 patients in our study who have asymptomatic HIV-infection or PGL progress to the full syndrome, the projected yearly cost of their hospital care alone would be about $500,000. Further studies are needed to determine whether maximizing outpatient services might reduce the cost of health care for patients with HIV infection.

The collection of data for our study was hindered by the lack of documentation in the clinic charts of information pertaining to sexual history, history of previous sexually transmitted diseases, presence or absence of risk factors and baseline laboratory data. These deficiencies suggest a need for continued education of primary-care physicians in the outpatient evaluation and management of patients with HIV-related illness. The most extensive literature on outpatient management of HIV-related diseases comes from the San Francisco General Hospital where an outpatient clinic was developed for the comprehensive care of HIV-infected patients[14-17]. This San Francisco clinic uses a multidisciplinary approach involving physicians, nurses, social workers and community support groups to maximize the outpatient management of patients with AIDS. More research is needed to provide guidelines for the optimal care of patients with HIV-related illnesses in the outpatient setting.

REFERENCES

1. Gottlieb MS, Schroff R, Schanker HM et al.: *Pneumocystis carinii* Pneumonia and Mucosal Candidiasis in Previously Healthy Homosexual Men: Evidence of a New Acquired Cellular Immunodeficiency. *N Engl J Med,* 1981, 305:1425-31.
2. Personal communication with Rodrigo Gillara, AIDS Epidemiologist, State of Hawaii, Department of Health.
3. AIDS Weekly Surveillance Report — United States, AIDS Program, Centers for Disease Control, April 11, 1988.
4. Revision of the CDC Surveillance Case Definition for Acquired Immunodeficiency Syndrome. *Morbidity and Mortality Weekly Report,* August 14, 1987, Vol. 36.
5. Classification System for Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus Infections. *Morbidity and Mortality Weekly Report,* 1986, 35:334-338.
6. Personal communication with Al Katz, MD, AIDS and Sexually Transmitted Diseases Specialist, State of Hawaii, Department of Health.
7. Blattner WA, Biggar RJ, Weiss SH et al.: Epidemiology of Human T-Lymphotropic Virus Type III and the Risk of the Acquired Immunodeficiency Syndrome. *Ann Intern Med,* 1985, 103:665-670.
8. Francis DP, Jaffe HW, Fultz PN et al.: The Natural History of Infection with the Lymphadenopathy-Associated Virus Human T-Lymphotropic Virus Type III. *Ann Intern Med,* 1985, 103:719-722.
9. Mather-Wagh U, Spigland I, Sacks HS et al.: Longitudinal Study of Persistent Generalized Lymphadenopathy in Homosexual Men: Relation to Acquired Immunodeficiency Syndrome. *Lancet,* 1984, 1:1033-38.
10. Curran JW: The Epidemiology and Prevention of the Acquired Immunodeficiency Syndrome. *Ann Intern Med,* 1985, 103:657-662.
11. Jaffe HW, Hardy AM, Morgan WM et al.: The Acquired Immunodeficiency Syndrome in Gay Men. *Ann Intern Med,* 1985, 103:662-64.
12. Groopman JE, Mayer KH, Sarngadharan MG et al.: Seroepidemiology of Human T-Lymphotropic Virus Type III Among Homosexual Men with the Acquired Immunodeficiency Syndrome of Generalized Lymphadenopathy and Asymptomatic Controls in Boston. *Ann Intern Med,* 1985, 102:334-37.
13. Andrulis DP, Beers VS, Bentley JD et al.: The Provision and Financing of Medical Care for the AIDS Patients in Public and Private Teaching Hospitals. *JAMA,* 1987, 258:1343-1346.
14. Kaplan LD, Wofsy CB, Volberding PA: Treatment of Patients with Acquired Immunodeficiency Syndrome and Associated Manifestations. *JAMA,* 1987, 257:1367-72.
15. Abrams DI, Dilley JW, Maxey LM et al.: Routine Care and Psychosocial Support of the Patient with the Acquired Immunodeficiency Syndrome. *Med Clin North Am,* 1986, 70:707-20.
16. Volberding PA: The Clinical Spectrum of the Acquired Immunodeficiency Syndrome: Implications for Comprehensive Patient Care. *Ann Intern Med,* 1985, 103:729-733.
17. Hollander H: Practical Management of Common AIDS-Related Medical Problems. *West J Med,* 1987, 146:237-240.



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Acinetobacter calcoaceticus bacteremia 1984 - 1987

James Yamashita, MD
Francis Pien, MD, FACP
R. Joseph Collins, MD

Acinetobacter calcoaceticus *is a gram-negative rod that has become recognized increasingly as a nosocomial pathogen. Ten cases of clinically significant* Acinetobacter calcoaceticus *bacteremia, seen over a three-year period in a community infectious disease practice, were reviewed retrospectively. We have drawn a comparison of the epidemiology, clinical manifestations, antibiotic sensitivities and therapy between these cases and previous studies of* Acinetobacter *infections.*

Patients and Methods

Patients were identified retrospectively on the basis of bacteriology records of Straub Clinic & Hospital for the period of October 1984 to September 1987. These were selected for study if they had at least one blood culture positive for *Acinetobacter calcoaceticus* with clinical manifestations of bacteremia (fever greater than 38°C, white blood cell count greater than 12,000, or a hypotensive episode with a systolic blood pressure less than 80 millimeters of mercury).

Organisms were initially identified by A.P.I.-20 Gram Negative Panel (Analytab Products). Further differentiation was obtained by testing for motility and fermentative capabilities on triple sugar iron agar, oxidative-fermentative dextrose, and 10% lactose media. Agar overlay modification of the Bauer-Kirby disk diffusion susceptibility test was used to test for in-vitro sensitivity to antibiotics[1].

Patients were studied for age, sex, and predisposing factors such as the presence of intravascular cannulas, urinary catheterization, underlying disease, surgery or antibiotic treatment less than two weeks prior to the positive blood culture, multisystem trauma and hospitalization in the intensive care unit. Antibiotic treatment and outcome were also analyzed.

Results

We reviewed the case reports of 10 patients who had at least one positive blood culture for *A. calcoaceticus* and clinical evidence of septicemia. Patient ages ranged from 20 to 65 years with a mean of 51.1 years. The ratio of male to female was 7:3. A variety of predisposing factors were recorded, (Table 1). There were four patients 60 years old or older. One patient received ampicillin prior to admission; four patients received either a first or second generation cephalosporin for prior perioperative antibiotic coverage. Underlying medical illnesses included diabetes mellitus (2), cirrhosis (3), malignancy (2), and (3) with renal disease (one on hemodialysis, one on peritoneal dialysis, two with hepatorenal syndrome). Three patients underwent surgery within two weeks prior to their positive blood cultures. Five patients required mechanical ventillation, one via a tracheostomy. One patient had multisystem trauma secondary to a motor vehicle accident. Six patients had received urinary catheterization and all patients had had either a peripheral or central intravascular cannula inserted.

TABLE 1.
Predisposing factors in *A. calcoaceticus* septicemia

Factor	Number of patients
Age 60 or older	4
Antibiotic treatment ≤2 weeks prior to positive blood culture	5
Medical illnesses	
Renal disease	4
Cirrhosis	2
Diabetes mellitus	2
Malignancy	2
Surgery ≤2 weeks prior to positive blood culture	3
Mechanical ventilation	5
ICU Hospitalization	6
Multisystem trauma	1
Intravascular cannula	10
Urinary catheterization	6

Clinical manifestations are recorded in Table 2. A temperature of greater than 38°C was present in eight of 10 patients. Only six patients had both fever and leukocytosis. Three patients experienced a hypotensive episode.

Bacteriologic characteristics of the 10 patients are recorded in Table 3. Subspecies *antitratus* was recovered from nine patients while subspecies *lwoffi* was isolated from one patient. Three patients had *A. calcoaceticus* isolated from other sites, including

Department of Medicine, University of Hawaii John A. Burns School of Medicine and Straub Clinic & Hospital, Honolulu, Hawaii.

TABLE 2.
Clinical characteristics of patients with *A. calcoaceticus* septicemia

Case No.	Age (yrs) Sex	White blood cell count ≥12,000	Hypotensive episode within 24 hours of septicemia
1	29/M	+	-
2	60/M	+	-
3	53/M	+	+
4	43/M	+	-
5	65/M	+	-
6	57/M	-	+
7	64/M	+	+
8	57/F	+	-
9	63/F	+	-
10	20/F	-	-
Totals		8/10	3/10

TABLE 3.
Bacteriologic characteristics of 10 patients with *A. calcoaceticus* bacteremia

Case No.	Number of positive blood cultures	*Acinetobacter* subspecies	Other bacteria recovered in blood cultures	Other sites with positive cultures for *Acinetobacter*
1	2	anitratus		
2	1	anitratus	Enterobacter cloacae	
3	3	anitratus		
4	6	anitratus		
5	1	anitratus		
6	2	anitratus		
7	1	anitratus		
8	1	anitratus	Enterococcus Pseudomonas aeruginosa	Tracheostomy
9	2	anitratus		Skin
10	2	lwoffi		Venous catheter tip

TABLE 4.
Disk susceptibilities of *Acinetobacter calcoaceticus*

Antibiotic Tested	Number of isolates tested	Percent sensitive
Amikacin	4	100
Gentamicin	10	100
Imipenem	2	100
Mezlocillin	7	100
Netilmicin	3	100
Piperacillin	1	100
Tetracycline	10	100
Tobramycin	1	100
Trimethoprim/sulfamethoxazole	10	90
Cefoperazone	3	67
Ampicillin	10	20
Cephalothin	10	0
Chloramphenicol	9	0
Cefamandole	2	0

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TABLE 5.
Antibiotic treatment and outcome

Case	Antibiotic Treatment	Outcome
1	Gentamicin, mezlocillin	Survival
2	Cefoperazone, gentamicin, mezlocillin, piperacillin, tobramycin	Death
3	Gentamicin, mezlocillin	Death
4	Mezlocillin, doxycyline	Death
5	Mezlocillin, gentamicin tobramycin	Survival
6	Gentamicin, mezlocillin	Survival
7	Trimethoprim/sulfamethoxazole	Death
8	Gentamicin, piperacillin, tobramycin	Survival
9	Gentamicin, cefotaxime	Survival
10	Gentamicin, ticarcillin/clavulanic acid	Survival

skin, venous catheter tip and tracheostomy wound. Two patients had polymicrobial sepsis. Antibiotic sensitivities of Acinetobacter calcoaceticus are recorded in Table 4, which includes the single isolate of subspecies *lwoffi;* this was sensitive to gentamicin, mezlocillin and tetracycline, but resistant to ampicillin, cephalothin, cefamandole and trimethoprim/sulfamethoxazole. All isolates were sensitive to gentamicin and tetracycline. Those isolates tested against imipenem, mezlocillin, netilmicin, piperacillin, and tobramycin were also universally sensitive to those drugs. All *anitratus* isolates were sensitive to trimethoprim/sulfamethoxazole. All tested isolates were resistant to cefamandole, cephalothin and chloramphenical.

Bacteriologic cure (negative blood cultures after antibiotic treatment) was achieved in at least eight of 10 patients. Two patients (cases 3 and 7), died before a repeat blood culture could be obtained. Antibiotic treatment and outcome are recorded in Table 5. Eight patients received an aminoglycoside, another eight received a third-generation penicillin, two received a third-generation cephalosporin, and one received doxycycline combined with mezlocillin. Only one patient was treated with trimthoprim/sulfamethoxazole alone. There were four deaths, giving a hospital mortality rate of 40%. Two of these deaths may have been a direct result of the septicemia.

Discussion

The genus *Acinetobacter* consists of a single species, *calcoaceticus,* which has two major subspecies; *anitratus* and *lwoffi*[2,3,4]. These organisms are aerobic, non-motile, oxidase-negative, nonspore-forming, gram-negative coccobacilli. They are differentiated by their abilities to ferment various carbohydrates[5]. Subspecies *anitratus* is more commonly involved in hospital-acquired infections, whereas subspecies *lwoffi* may be more common in community-acquired infections[6]. Although both *anitratus* and *lwoffi* appear to have similar antibiotic sensitivities[3], Bergogne-Berezin and Joly-Guillou[7] have reported that subspecies *anitratus* has a greater range of antibiotic resistance than *lwoffi.* They also reported an increased frequency of isolating subspecies *anitratus,* compared to *lwoffi,* from 77.5% in 1970-1980, to 94.5% in 1984-1985.

A. calcoaceticus is part of the normal flora of the skin, conjunctiva, saliva, respiratory and genito-urinary tracts[2,3,4]. A recent study (1981) revealed that the most common gram-negative isolate from the hands of both hospital personnel and a control population was *A. calcoaceticus,* indicating a possible route of transmission[3,8]. In addition to human sources, the organism has been isolated from room humidifiers[9], mist tents, respiratory therapy equipment, intravascular cannulae, administration sets, dialysis baths and angiography catheters[3]. Until recently, this organism was considered to have a relatively low potential for virulence, and that the incidence of true primary *A. calcoaceticus* infections was uncommon, compared to its colonization[6,10].

Acinetobacter has been increasingly recognized in a variety of infections of the respiratory tract such as (pneumonia, lung abscesses, tracheobronchitis and empyema. It has also invaded the blood, central nervous system (meningitis, brain abscess), skin (cellulitis, abscesses), cardiovascular system (endocarditis, phlebitis). It also has caused urinary tract infection, conjunctivitis, intra-abdominal and intrapelvic abscesses, osteomyelitis, septic arthritis and wound infections[6,10]. The majority of these infections were hospital-acquired and occurred in patients with the following predisposing factors: The very young and the very old, (age, less than 10 years or greater than 60 years), instrumentation (intravascular cannulae, urinary catheterization, nasogastric and endotracheal intubation), intensive-care-unit hospitalization, prior treatment with antibiotics to which the organism is resistant, chronic disease associated with increased risk of infection (diabetes mellitus, ulcerative colitis, cirrhosis, malignancy, renal disease), multisystem trauma, or recent surgery (within two weeks prior to the positive blood culture)[3,5].

Clinically, patients with *Acinetobacter* bacteremia may either be asymptomatic or may present with septicemia, demonstrated by high fevers and circulatory insufficiency (in the absence of cardiovascular disease)[6].

Smego[3] reviewed 18 patients with "true" *Acinetobacter* bacteremia and reported fever in 15, leukocytosis in 14, and hypotension with clinical signs of septic shock in four patients. Hypotension was associated with a higher mortality (50% versus 7%), but this was not statistically significant: Overall mortality was 17%.

Glew et al.[6] reported that seven of nine patients with *Acinetobacter* bacteremia developed shock, but did not discuss any associated increased mortality; overall mortality in their study was 22%.

Garber et al.[11] reported that all seven of their burn patients with *Acinetobacter* septicemia died. This is in contrast to reports by Gardner et al.[12] and Robinson et al.[13], whose patients did not have evidence of significant clinical symptoms. The 1979 report from the Centers for Disease Control reported that only 0.8% of primary *Acinetobacter* bacteremias were associated with death[14]. It appears therefore, that there is a significant range in the clinical manifestations and mortality associated with *Acinetobacter* bacteremia.

Ristuccia and Cunha[5] reported that most strains of *A. calcoaceticus* var. *anitratus* were relatively resistant to first- and second-generation cephalosporins, penicillin, ampicillin, cloramphenicol, vancomycin, clindamycin and erythromycin, including antibiotics with moderate activity such as amikacin, gentamicin, tetracycline and anti-Pseudomonal penicillins. However, the most active antibiotics against *Acinetobacter* were found by Ristuccia and Cunha to be doxycycline, minocycline, polymyxin B, tobramycin, trimethoprim/sulfamethoxazole and third-generation cephalosporins[5]. In serious *Acinetobacter* infections, they recommend parenteral trimethoprim/sulfamethoxazole, minocycline, or a third-generation cephalosporin; in other instances, a combination of an aminoglycoside with a third-generation penicillin may be effective[5].

Recently imipenem, aztreonam and ciprofloxacin have been

(Continued)

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found to be very effective in vitro against *A. calcoaceticus* var. *anitratus*[15,16].

Conclusion

In general, our own study population was similar to the patients in these other reports. The age distribution showed a mild predominance of elderly patients, but this is to be expected in a non-pediatric practice. Ours showed a greater number of males affected, similar to the other studies[17-19], but the clinical significance of this has not been defined. Every patient had an intravascular cannula in situ, plus at least one other predisposing factor. Seven patients appeared to have hospital-acquired infections. The majority of patients presented with fever and leukocytosis. Three patients had a hypotensive episode. There were four deaths, primarily because of their underlying illnesses.

Isolates in our study of patients exhibited similar antibiotic susceptibilities to those reported elsewhere, except for the single *lwoffi* isolate that was the only isolate resistant to trimethoprim/sulfamethoxazole. All patients received appropriate antibiotics and bacteriologic cure was obtained in at least eight of 10 patients (two patients died prior to obtaining repeat blood cultures).

Acinetobacter septicemia had a high mortality rate in our study; it must be considered a serious pathogen therefore. Most infections are hospital-acquired in patients with serious underlying illnesses. Our susceptibility data suggests that treatment with an aminoglycoside and a broad spectrum penicillin would be an appropriate combination therapy for the initial treatment of *Acinetobacter calcoaceticus* bacteremia. Third-generation cephalosporins, imipenem, and parenteral tritmethotprim/sulfamethoxazole could also be considered for therapy.

Summary

Ten patients with clinically significant *Acinetobacter calcoaceticus* bacteremia were reviewed retrospectively. Fever and leukocytosis were common findings, whereas hypotension was present in only three out of 10 patients. All patients had an intravascular cannula in situ and at least one other predisposing factor. The majority of infections were hospital-acquired and caused by subspecies *anitratus*. Appropriate antibiotic treatment led to bacteriologic cure in at least 80% of the patients. However, hospital mortality was 40%, with two deaths possibly related to the *Acinetobacter* bacteremia. Therefore, *Acinetobacter* bacteremia was not an innocuous finding in our study and it should be treated aggressively with appropriate antibiotic therapy.

REFERENCES

1. Barry AL, Garcia F, Thrupp LD: An improved single-disk method for testing the antibiotic susceptibility of rapidly growing pathogens. *Am J Clin Pathol,* 1970:53:149-158.
2. Gill FA, Gill VJ: *Acinetobacter* species, In: Mandell GL, Douglas RG, Bennett JE, ed. Principles and practice of infectious disease. 2nd ed. New York: John Wiley & Sons, 1985: 1254-56.
3. Smego RA Jr: Endemic nosocomial *Acinetobacter calcoaceticus:* clinical significance, treatment, and prognosis. *Arch Intern Med,* 1985:145: 2174-79.
4. Taplin D, Rebell G, Zaias N: The human skin as a source of *Mima-Herellea* infections. *JAMA,* 1963: Dec. 7: 166-168.
5. Ristuccia PA, Cunha BA: *Acinetobacter* Infect Control 1983:4:226-29.
6. Glew RH, Moellering RC Jr, Kunz LJ: Infections with *Acinetobacter calcoaceticus (Herellea vaginicola):* clinical and laboratory studies. *Medicine,* 1977:56:79-97.
7. Bergogne-Berezin E, Joly-Guillou L: An underestimated nosocomial pathogen, *Acinetobacter calcoaceticus. J Antimicrob Chemother,* 1985:16:535-38.
8. Larson EL: Persistent carriage of gram-negative bacteria on hands. *Am J Infect Control,* 1981:9:112-19.
9. Smith PW, Massanari RM: Room humidifiers as the source of *Acinetobacter* infection. *JAMA,* 1977:237:795-97.
10. Larson E: A decade of nosocomial Acinetobacter, *Am J Infect Control,* 1984:12:14-18.
11. Graber CD, Rabin ER, Mason AD Jr, Vogel EH: Increasing incidence of nosocomial *Herellea vaginocola* infections in burned patients. *Sur Gynecol Obstet,* 1962:114:109-15.
12. Gardner P, Griffin WB, Swartz MN, Kunz LJ: Non-fermentative gram-negative bacilli of nosocomial interest. *Am J Med,* 1970:48:735-39.
13. Robinson RG, Garrison RG, Brown RW: Evaluation of the clinical significance of the genus *Herellea. Ann Intern Med,* 1964:60:19-27.
14. Retailliau HF, Hightower AW, Dixon RE, Allen JR: *Acinetobacter calcoaceticus:* A nosocomial pathogen with an unusual seasonal pattern. *J Infect Dis,* 1979:139:371-5.
15. Stiver HG, Bartlett KH, Chow AW: Comparison of susceptibility of gentamicin-resistant and -susceptible *"Acinetobacter anitratus"* to 15 alternative antibiotics, Antimicrob Agents Chemother, 1986:30:624-25.
16. Rolston KVI, Bodey GP: In vitro susceptibility of *Acinetobacter* species to various antimicrobial agents, Antimicrob Agents Chemother, 1986:30:769-70.
17. Raz R, Alroy G, Sobel JD: Nosocomial bacteremia due to *Acinetobacter calcoaceticus. Infection,* 1982:10:168-71.
18. Ramphal R, Kluge RM: *Acinetobacter calcoaceticus* variety *anitratus:* an increasing problem. *Am J Med Sci,* 1979:227:57-66.
19. Rolston K, Guan Z, Bodey GP, Elting L: *Acinetobacter calcoaceticus* septicemia in patients with cancer. *South Med J,* 1985:78:647-51.

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Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

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- Slight elevations in hepatic enzymes
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Cardiac disease associated with the Acquired Immunodeficiency Syndrome: A case report and review of the literature

Michael H. Nagoshi, MD*
Osamu Fukuyama, MD**

The Acquired Immunodeficiency Syndrome (AIDS) is characterized by global immune dysfunction leading to the development of opportunistic infections, unusual neoplasms and premature death[1,2]. The extent of organ system involvement by neoplasm or potentially treatable infection is frequently greater than clinically suspected and is often unrecognized until autopsy [3,4]. Cardiac involvement by Kaposi's sarcoma and several opportunitistic organisms has been found at autopsy in patients without cardiovascular symptoms. However, AIDS patients may manifest significant heart disease as in three cases presenting with heart failure related to a dilated cardiomyopathy reported by Cohen et al[5]. The heart may be an important and often overlooked site of involvement in AIDS patients. We present here a case report and review of pertinent literature.

Case Report

The patient was a 24-year-old homosexual man who initially presented in October of 1985 with dyspnea, pleuritic chest pain and fever related to Pneumocystis carinii pneumonia diagnosed by bronchoalveolar lavage. He was treated successfully with pentamidine; he had developed rash and leukopenia on trimethoprim and sulfamethoxazole. He was found to be positive for HTLV-3 antibody by the ELISA method.

The patient did well, despite chronic oral and esophageal candidiasis with severe odynophagia, until November of 1986, when he complained of progressive shortness of breath on exertion, chest pain, non-productive cough and intermittent fever. Physical exam, chest roentgenogram, complete blood count, arterial blood gas measurement, electrocardiograph, pulmonary function studies including diffusing capacity, routine sputum cultures and bronchoalveolar lavage were unremarkable. Empiric trials of therapy with ampicillin and erythromycin were ineffective. His dyspnea persisted even though there was a lack of significant objective findings.

In December of 1986, the patient was hospitalized because of disabling dyspnea and increasing odynophagia. One week prior to admission, his chest roentgenogram and arterial blood gases had been normal. Physical exam revealed a thin, Hawaiian-Japanese-Caucasian, tachypneic man with a blood pressure of 90/60, pulse of 140 beats/min., respiratory rate of 30/min., temperature of 100°F, bilateral inspiratory crackles and an S3 gallop. He had no peripheral edema. Chest roentgenogram showed a diffusely enlarged heart with mild pulmonary vascular congestion. His arterial p02 on room air was 54 TORR. Electrocardiography revealed sinus tachycardia and non-specific T-wave changes. An echocardiogram (Fig. 1) revealed marked dilatation of all four cardiac chambers and an estimated ejection fraction of approximately 25%, without valvular lesions or vegetations.

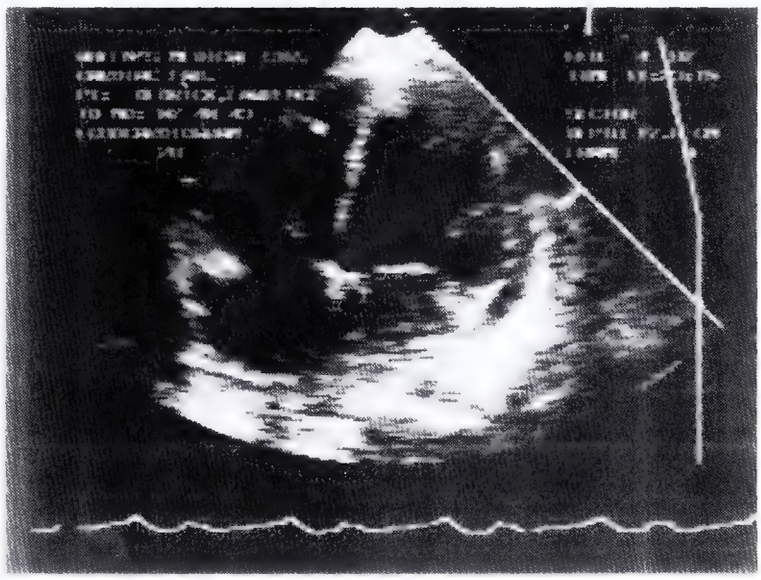


Figure 1: 2D Echocardiogram (apical four-chamber view).

The patient's symptoms improved after receiving digoxin, furosemide and captopril. Blood cultures at the time of admission remained sterile and a toxoplasmosis titer was negative. The patient had a free thyroxine index of 11.4 (nl-4-10) but a normal TRH stimulation test.

He experienced a slow decline in functional status after discharge and was readmitted in January 1987 with a pneumonia caused by Enterobacter cloacae. The patient responded clinically to parenteral antibiotics, but died suddenly from unknown causes.

The autopsy revealed a small pericardial effusion and an enlarged (530 gm) heart with biventricular dilatation and normal valves. Histologically, there was mild to moderate myocardial hypertrophy and focal areas of interstitial fibrosis (Fig. 2). The lungs revealed congestion and edema; the brain and adrenal glands were unremarkable.

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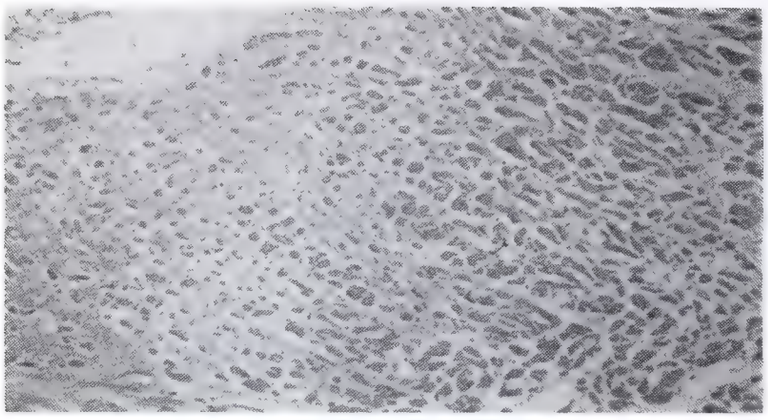


Figure 2: Histologic section of left ventricle (40X, Hematoxylin-Eosin stain).

Discussion

The incidence of cardiac involvement associated with AIDS has not been determined. Cardiac abnormalities are found in 20% to 52% of autopsy cases[3,4,6,7,8,9]. Congestive heart failure, pericardial tamponade and arrhythmias may account for 2% to 10% of AIDS-related mortality[3,8,9], although determining the cause of death in these patients is made difficult by the coexistence of multiple serious diseases[10].

The metastatic lesions of Kaposi's sarcoma are the most frequently cited cardiac lesion in patients with AIDS. In a series of patients with Kaposi's sarcoma, 20% to 56% have been reported to have metastatic involvement of the heart. The epicardium, pericardium and myocardium may all be involved [3,6,7]. Most of the patients were asymptomatic during life, without cardiomegaly on chest roentgenogram.[7]

Myocarditis and endocarditis caused by *Cryptococcus neoformans*[11], *Mycobacterium avium intracellulare*[6], *Toxoplasma gondii*[8] and *Aspergillus fumigatus*[12] have been reported. Involvement of the heart by these opportunistic organisms usually occurs in the setting of already widespread infection and, although often clinically silent, may contribute to death in some cases[6].

Non-bacterial thrombotic endocarditis has also been reported and may involve all four heart valves. Emboli to the brain, lungs, kidneys, adrenal glands and spleen have been reported[6].

Pericardial effusions secondary to *Nocardia asteroides*[13], *Mycobacterium tuberculosis*[14] and *Cryptococcus neoformans*[6,11] have been seen and may be complicated by cardiac tamponade.

Cohen et al reported three cases of dilated cardiomyopathy in association with AIDS[5]. These patients had recurrent opportunitistic infections present for six months or more before rapidly fatal cardiac decompensation occurred. Autopsy revealed four chamber dilatation, myofibrillar loss and focal myocarditis. The authors postulate that several factors may contribute to the development of myocarditis and subsequent cardiomyopathy in patients with AIDS. First, AIDS patients are predisposed to multiple viral infections. Epstein-Barr virus and Cytomegalovirus may be more likely to cause myocarditis in AIDS patients. Second, immune suppression may increase the likelihood of infection with cardiotropic viruses as demonstrated in animal models[8]. The immune system impairment may predispose to cardiomyopathy by a non-infectious, and as yet unrecognized, mechanism[17].

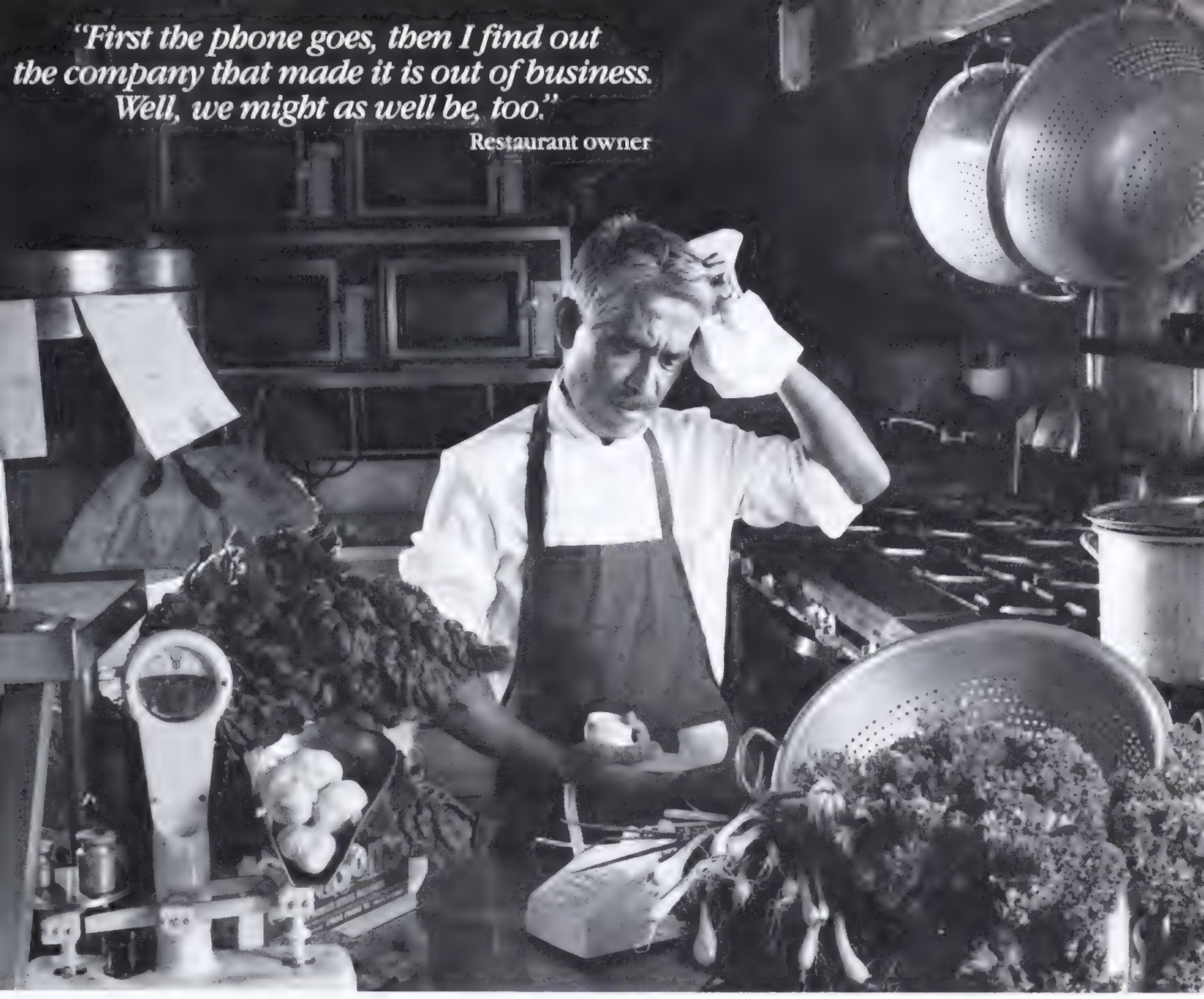
Eschocardiography plays an important role in the recognition of these cardiac abnormalities[18]. As much as 70% of hospitalized AIDS patients who have no evidence of cardiac disease on clinical exam, may have pericardial effusions, left or right ventricular dysfunction, or marantic endocarditis demonstrable on echocardiogram[19]. The frequency of various echocardiographic abnormalities observed in AIDS patients is different from that in AIDS-related complex, or in non-AIDS patients, suggesting that these cardiac abnormalities may be more than coincidental findings[17].

Conclusions

Involvement of the heart by infections or neoplasms are frequently found at autopsy in patients with AIDS despite the absence of cardiac symptoms during life. Clinically significant cardiac dysfunction has also been reported and may lead to death, although its incidence is not well documented[6]. The case presented here illustrates the importance of recognizing dilated cardiomyopathy as one of the diagnostic possibilities in AIDS patients who present with dyspnea. Echocardiography can give useful information in most cases[19,20].

REFERENCES

1. Changes in Premature Mortality — United States, 1984-1985, Leads from the MMWR. *JAMA* 1987, 257(9):1161.
2. Kristal AR: The Impact of the Acquired Immunodeficiency Syndrome on Patterns of Premature Death in New York City. *JAMA* 1986, 255(17):2306-2310.
3. Welch K, Finkbeiner W, Alpers CE et al: Autopsy Findings in the Acquired Immune Deficiency Syndrome. *JAMA* 1984, 252(9):1152-1159.
4. Hui AN, Koss MN, Meyer PR: Necropsy Findings in Acquired Immunodeficiency Syndrome, A Comparison of Premortem Diagnoses with Postmortem Findings. *Hum Pathol,* 1984, 15(7):671-676.
5. Cohen IS, Anderson DW, Virmani R, et al: Congestive Cardiomyopathy in Association with the Acquired Immonodeficiency Syndrome. *N Engl J Med,* 1986, 315:628-630.
6. Cammarosano C and Lewis W: Cardiac Involvement by Kaposi's Sarcoma in Acquired Immune Deficiency Syndrome (AIDS). *Am J Cardiol* 1985, 5(3):703-6.
7. Silver MA, Macher AM, Reichert CM et al: Cardiac Involvement by Kaposi's Sarcoma in Acquired Immune Deficiency Syndrome (AIDS). *Am J Cardiol* 1984, 53:983-985.
8. Reichert CM, O'Leary TJ, Levens DL, et al: Autopsy Pathology in the Acquired Immune Deficiency Syndrome. *Am J Pathol* 1983, 112:357-387.
9. Anderson DW, Virmani R, Reilly JM, et al: Prevalent Myocarditis at Necropsy in the Acquired Immunodeficiency Syndrome. *J Am Coll Cardiol,* 1988, 11(4):792-9.
10. Moskowitz L, Hensley GT, Chan JC, Adams K: Immediate Cause of Death in Acquired Immunodeficiency Syndrome. *Arch Pathol Lab Med,* 1985, 109:735-738.
11. Lewis W, LipsickJ, Cammarosano C: Cryptococcal Myocarditis in Acquired Immune Deficiency Syndrome. *Am J Cardiol,* 1985, 55:1240.
12. Henochowicz S, Mustafa M, Lawrinson WE, et al: Cardiac Aspergillosis in Acquired Immune Deficiency Syndrome. *Am J Cardiol,* 1985, 55:1239-1240.
13. Holtz HA, Lavery DP, Kapila R: Actinomycetales Infection in the Acquired Immunodeficiency Syndrome. *Ann Intern Med,* 1985, 102:203-5.
14. Sunderam G, McDonald RJ, Maniatis T et al: Tuberculosis as a Manifestation of the Acquired Immunodeficiency Syndrome (AIDS). *JAMA* 1986, 256:362-6.
15. O'Connell JB, Reap EA, Robinson JA: The Effects of Cyclosporine on Acute Murine Coxsackie B3 Myocarditis. *Circulation* 1986, 73:353-9.
16. Calabrese LH, Proffitt MR, Yen-Lieberman B, et al: Congestive Cardiomyopathy and Illness Related to the Acquired Immunodeficiency Syndrome (AIDS) Associated with Isolation of Retrovirus from Myocardium. *Ann Intern Med,* 1987, 107(5):691.
17. Kinney EL, Wright RJ, AIDS-Associated Heart Disease: Is it a Distinct Entity? (Abstract). *J Am Coll Cardiol,* 1987, 9(2):220A.
18. Reilly JM, Cunnion RE, Anderson DW, et al: Patients With Acquired Immunodeficiency Syndrome and Histopathological Myocarditis Frequently Manifest Major Clinical Cardiac Abnormalities (Abstract). *J Am Coll Cardiol,* 1987, 9(2):154A.
19. Fink L, Reichek N, St John Sutton MG: Cardiac Abnormalities in Acquired Immune Deficiency Syndrome. *Am J Cardiol* 1984, 54:1161-3.
20. Goldschmidt RH, Mills J: Cardiomyopathy and AIDS (letter). *N Eng J Med,* 1987, 316(18):1158-1159.



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AIDS: Hawaii's second test of human decency

David B. McEwan, MD, CFPC*

We failed the first test — with Hansen's Disease (Leprosy). We are in the seventh year of the AIDS pandemic: It is still in its childhood. Our Hippocratic Oath has and will put each one of us to the test. How the government, the health-care establishment and the community responds to the problem of AIDS will determine to what degree we can call ourselves a civilized people.

When you physicians, your staffs or your patients are dealing with HIV-infection issues in your offices (whether it involves man or woman, infant or child or adult, gay, straight, hemophiliac, transfusion recipient or i.v. drug user), you will find the following resource lists helpful:

A. **Organizations dealing with AIDS exclusively:**

1) AIDS Community Care Team ..... 538-9011; beeper 4694
2) Community Consortium of AIDS Physicians/Hawaii ..... 537-2211 ex. 448
3) State Dept. of Health HIV Alternate Test Site Program 735-5303
4) Governor's AIDS Committee 548-2033
5) Ho'omana 'olana (AIDS Housing Project) 522-9022
6) Hawaii AIDS Task Group on the UH Manoa campus 948-7400
7) Kauai AIDS Project 822-0878
8) Life Foundation (AIDS Foundation of Hawaii) 924-2437
9) Maui AIDS Foundation 667-0655
10) Waikiki Health Center AIDS hotline 922-1313
11) Names Project Hawaii (Quilt) 737-1662

B. **Organizations significantly involved in AIDS issues:**

1) American Civil Liberties Union 545-1722
2) Blood Bank of Hawaii 845-9966
3) State Department of Education 548-2360
4) Health Promotion & Education Office, DOH 548-5886
5) Gay Community Center & Information Line 536-6000
6) Hemophilia Foundation of Hawaii 521-5483
7) Hawaii Council of Churches 263-9788
8) Hawaii Medical Association, Communicable Disease Committee 536-7702
9) Hospice Hawaii 924-9255
10) Legal Aid 536-4302
11) Metropolitan Community Church 526-0594
12) Oahu Community Corrections Medical Center 848-2535
13) St. Andrews Episcopal (monthly AIDS worship services) 524-2822
14) St Francis Hospice Program 547-6385
15) Tripler Army Medical Center AIDS Service 433-6513

* Chief, Family Medicine, the Honolulu Medical Group
Co-founder, Life Foundation (The AIDS Foundation of Hawaii)
Founder, the Community Consortium of AIDS Physicians in Hawaii



The AMA Hospital Medical Staff Section Twelfth Assembly

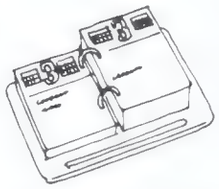
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Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS

ONGOING

For a complete list of ongoing programs, please refer to the September 1988 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Nov. 2-19, 1988	PACIFIC COAST OBSTETRICAL & GYNECOLOGICAL SOCIETY 55TH ANNUAL MEETING, Eastside Travel Service, 616 Bellevue Way N.E., Bellevue, Wash., 98004, 206-454-4005; 1-800-327-7731. Location: American Hawaii Cruises, S.S. Independence.
Nov. 14, 1988	AIDS: PRACTICAL APPLICATIONS FOR HEALTH-CARE PROVIDERS, National Institutes of Allergy & Infectious Diseases and Hawaii State Department of Health, Contact: Corinne Yazawa, BEd., HSDOH, Personnel Office — Training Section, P.O. Box 3378, Honolulu 96801, 808-548-5970. Location: Hilton Hawaiian Village, Honolulu.
Nov. 14-16, 1988	THE 2ND INTERNATIONAL SYMPOSIUM ON MAN IN THE SEA, Department of Physiology, John A. Burns School of Medicine, 1960 East-West Rd., Biomed T-608, Honolulu, 96822, 808-948-8827. Location: Oahu.
Nov. 24, 1988	HANSEN'S DISEASE, 1988, Hansen's Disease Community Program, State of Hawaii and co-sponsored by the Hawaii Medical Association. Contact: Richard I. Frankel, MD,3650 Maunalei Ave., Honolulu 96816, 808-735-2472. Location: Halekulani Hotel, Honolulu.
Dec. 2-4, 1988	HAWAII ASSOCIATION OF OSTEOPATHIC PHYSICIANS AND SURGEONS, annual meeting. Honolulu, Hawaii, 808-261-6105.
Dec. 4-9, 1988	CURRENT CONCEPTS IN EMERGENCY CARE: EMPHASIS ON PEDS TRAUMA, INFECTIOUS DISEASES INCLUDING AIDS, Institute for Emergency Medical Education; Washington Chapter, ACEP, 206-671-1800. Location: Royal Lahaina Resort, Maui.
Dec. 10-17, 1988	CRITICAL ISSUES IN UROLOGY, Division of Urology, Stanford University School of Medicine. Contact: Symposia Medicus, 2815 Mitchell Dr., Suite 128, Walnut Creek, Calif. 94598-1622, 415-935-7889. Location: Sheraton Kauai, Kauai.
Dec. 24-30, 1988	ADVANCES IN MEDICINE: CHOLESTEROL, SEXUALLY TRANSMITTED DISEASES, HYPERTENSION, PSYCHIATRY, ALLERGY, Symposium Maui, Inc., and co-sponsored by the Hawaii Medical Association. Contact: Paula Harrison, P.O. Box 833, Makawao, HI 96768, 808-878-6757. Location: Royal Lahaina Resort, Maui.
Dec. 26-31, 1988	EMOTIONAL GROWTH AND CREATIVITY IN ADULT LIFE, American Institute of Medical Education, 818-842-8818. Location: Kona Surf Resort, Kona, Big Island.
Dec. 27-31, 1988	MAUI ANNUAL YEAR-END REVIEW — Medical Care of the Surgical Patient, Continuing Education Society and co-sponsored by the Hawaii Medical Association. Contact: Michael Dimitrion, MD, 99-128 Aiea Heights Dr., Suite 603, Aiea 96701, 808-487-6766. Location: Maui Inter-Continental Wailea.
Jan. 9-11, 1989	UROGYNECOLOGY, American College of Obstetricians and Gynecologists, 202-863-2543. Location: Waiohai Hotel, Kauai.
Jan. 12-14, 1989	OBSTETRIC CONTROVERSIES, American College of Obstetricians and Gynecologists, 202-863-2543. Location: Waiohai Hotel, Kauai.
Jan. 12-15, 1989	RADIOLOGY: THE STATE OF THE ART, University of Washington, Dept. of Radiology; The Center for Medical Education, 800-243-5976. Location: Maui Marriott Resort.

The Hawaii Medical Association does not review or evaluate the programs listed in the Hawaii Medical Journal Continuing Medical Education column and assumes no responsibility for educational value, scentific content, changes in agenda or cancellations.

(Continued)



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Jan. 14-21, 1989	10TH ANNUAL ROYAL HAWAIIAN EYE MEETING, Hawaiian Eye Foundation, c/o Mary Charles & Associates, 2334 S. King St., Suite 205, Honolulu 96826, 808-942-9655. Location: Westin Kauai Convention Center.
Jan. 14-21, 1989	10th ANNUAL ADVANCES IN CLINICAL MEDICINE, PRACTICAL, CLINICAL UPDATES FOR ALL PHYSICIANS & SURGEONS, Physicians Medical Seminars. 800-334-6578. Location: Choice of Hotels, Honolulu, Maui.
Jan. 15-20, 1989	HAWAIIAN SEMINAR ON CLINICAL ANESTHESIA, California Society of Anesthesiologists. Contact CSA, 1065 E. Hillsdale Blvd., Suite 410, Foster City, Calif. 94404, 415-345-3020. Location: Sheraton Kauai Hotel, Kauai.
Jan. 15-21, 1989	14th ANNUAL HAWAII HOSPITAL MEDICAL STAFF AND TRUSTEE CONFERENCE, Estes Park Institute, 800-223-4430. Location: Kona, Hawaii.
Jan. 16-20, 1989	ANESTHESIA REVIEW COURSE, Institute for Post-Graduate Education, 619-948-8377. Location: Royal Lahaina, Maui.
Jan. 16-20, 1989	HAWAIIAN SEMINAR ON CLINICAL ANESTHESIA, California Society of Anesthesiologists, 415-345-3020. Location: Sheraton Kauai Hotel, Poipu Beach, Kauai.
Jan. 21-28, 1989	ORTHOPEDIC EMERGENCIES, Scripps Memorial Hospital-Encinitas & The American Institute of Postgraduate Education. Contact: Edith S. Bookstein, AIPE, P.O. Box 3586, La Jolla, Calif. 92038, 619-454-3212. Location: Kona Surf Resort, Big Island.
Jan. 21-28, 1989	10th ANNUAL ADVANCES IN CLINICAL MEDICINE PRACTICAL, CLINICAL UPDATES FOR ALL PHYSICIANS AND SURGEONS, Physicians Medical Seminars, 800-334-6578, Hawaiian Island Cruise, Aloha Pacific Cruises, Honolulu.
Jan. 26-30, 1989	EMERGENCY MEDICINE: A CRITICAL APPRAISAL SERIES 2, Emergency Medical Abstracts, California Chapter, ACEP. 800-243-5976. Location: Maui Marriott Resort.
Jan. 28-Feb. 4, 1989	10th ANNUAL ADVANCES IN CLINICAL MEDICINE PRACTICAL, CLINICAL UPDATES FOR ALL PHYSICIANS AND SURGEONS, Physicians Medical Seminars, 800-334-6578. Location: Choice of Hotels, Honolulu, Maui, Big Island.
Jan. 29-Feb. 2, 1989	FOCUSED SEMINAR: QUALITY OF CARE, Estes Park Institute, 800-223-4430. Location: Maui, Hawaii.
Jan. 29-Feb. 3, 1989	CLINICAL UPDATE IN ANESTHESIOLOGY, Tucson Hospitals Medical Education Program. Contact: Murray G. Atnikov, MD, c/o Box F110-63, Blaine, Wash. 98230, 604-874-5291. Location: Stouffer's Wailea Beach Resort, Maui.
Feb. 6-10, 1989	HAWAII '89: 4th ANNUAL ADVANCES IN PRIMARY CARE, Pacific Institute of Continuing Medical Education and co-sponsored by the Hawaii Medical Association. Contact: Valerie Murray, P.O. Box 1059, Koloa, Hawaii 96756, 808-742-7471. Location: Waiohai Resort, Kauai.
Feb. 6-10, 1989	7TH ANNUAL CONFERENCE ON GASTROINTESTINAL AND HEPATIC DISEASES, The Honolulu Medical Group Research & Education Foundation and co-sponsored by the Hawaii Medical Association. Contact: Gary Glober, MD, 1380 Lusitana St., Suite 701, Honolulu, 96813, 808-536-1021. Location: Westin Maui Hotel.
Feb. 13-27, 1989	INTERNAL MEDICINE, William L. Nietz, Division of Education, Mayo Clinic, Rochester, MN 55905, 507-284-2085. Location: Maui Marriott Resort.
Feb. 25-March 4, 1989	UPDATE: CONTROVERSIES IN EMERGENCY & PRIMARY CARE, Scripps Memorial Hospital-Encinitas & The American Institute of Postgraduate Education. Contact: Edith S. Bookstein, AIPE, P.O. Box 2586, La Jolla, Calif. 92038, 619-454-3213. Location: The Royal Lahaina Resort, Maui.
Feb. 28-March 3, 1989	THE FIRST ANNUAL QUEEN'S CANCER INSTITUTE SYMPOSIUM: CANCER CARE '89, The Queen's Cancer Institute and co-sponsored by the Hawaii Medical Association. Contact: Karen Taoka, The Queen's Cancer Institute, 1301 Punchbowl St., Honolulu 96813, 808-547-4660. Location: Hilton Hawaiian Village, Honolulu.
March 3-5, 1989	ASIA-PACIFIC ALZHEIMER'S DISEASE CONFERENCE, Division of Geriatric Medicine, Department of Medicine, John A. Burns School of Medicine, 347 N. Kuakini St., Honolulu 96817, 808-523-8461. Location: Hilton Hawaiian Village, Honolulu
March 5-9, 1989	ASIA-PACIFIC OSTEOPOROSIS CONFERENCE, Kuakini Osteoporosis Center, 347 N. Kuakini St. Honolulu 96817, 808-547-9578. Location: Hilton Hawaiian Village, Honolulu.
March 5-8, 1989	HOTSPOTS IN PEDIATRIC UROLOGY, Hawaii Urological Society and co-sponsored by the Hawaii Medical Association. Contact: Vincent Ortolano, M.D., 3420B Kuhio Hwy., Lihue, Hawaii 96766, 808-245-1514. Location: Poipu, Kauai.



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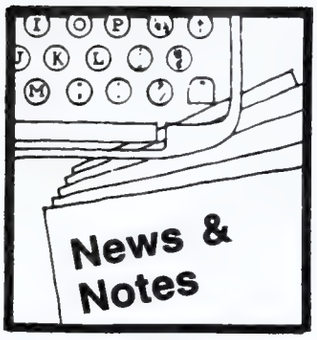
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HENRY YOKOYAMA, MD

Life in These Parts

The Great Escape: Retired Hawaii Kai physician Brem "Bob" Vanderstok was a premed student in Holland and an Air Corps reservist when the Nazis occupied the Netherlands in only five days. Bob managed to knock down two Messerschmitts in his Fokker D-XXI. He wound up in the Dutch Underground and successfully escaped to England where he joined the Royal Air Force and flew the Spitfire. With six victories and barely an Ace, he was shot down and ended in Stalag Luft III (at the border of East Germany and Poland) where most of the incorrigible POWs were confined. Bob was one of only three prisoners who escaped in the massive escape attempt reported in the book and movie "The Great Escape" . . . Fifty of the escapees were executed and another 27 recaptured. Bob and two Norwegians eluded the Nazis. . . Back in Britain, Bob was given command of the 322 Squadron (90% Dutch pilots), which squashed 155 doodlebugs (Nazi cruise missiles). After the war, he was a member of the Dutch general staff for a short time, but then elected to go back to medical school. He then settled in the U.S. and became the SS Lurline's ship doctor. Bob was with the Straub Clinic and then retired as senior physician at the Waimano Home. He published his book, "Oologsvhieger van Oranje," in 1981 which sold 34,000 copies in the Netherlands. The English version, "War Pilot of Orange," was published recently.

The horror of the Nazis still haunts Bob, who discovered after the war that his whole family had been wiped out. "That's why I buried myself in medicine and came to America . . . I wanted to do something to heal."

A Modern Psalm

(From "Mixed Plate" By Nadine W. Scott)

The Rev. Bob Fraser, a Unitarian minister, wrote the following poem for his 1975 sermon, "Fail Safe," and it has appeared in various publications since:

Medical science is my shepherd:
I shall not want. It maketh me to lie down in hospital beds;
It leadeth me beside the marvels of technology.
It restoreth my brain waves;
It maintains me in a persistent vegetative state for its name's sake.
Yea, though I walk through the valley of the shadow of death, I will find no end to life;
For thou art with me;
Thy respirator and heart machine they sustain me.
Thou preparest intravenous feeding for me
In the presence of irreversible disability
Thou anointest my head with oil
My cup runneth on and on and on and on.
Surely coma and unconsciousness shall follow me all the days of my continued breathing;
And I will dwell in the intensive care unit forever.

Paul B. Hoffman, executive director of Emory University Hospital commented as follows in the December 1984 issue of the *Journal of the Medical Association of Georgia:* "A Modern Psalm" depicts the ultimate consequence of a techonologic imperative which ignores the inevitability of our own mortality (sic) . . . These sentiments were not intended to be sacrilegious. . . They capture the genuine fear that many people associate with a loss of control over their own care. . . When patients are unable for any reason to make decisions about the use of diagnostic and therapeutic services, an unambiguous and effective procedure must be available to resolve the dilemma." Rev. Fraser believes that the living will can resolve the dilemma. . .
(Ed: Our thanks to Fred Reppun for sending in the material)

Honored, Elected & Appointed

Karen Breakstone of Waimea was recently elected to fellowship in the American Academy of Pediatrics . . . Noa Emmet Aluli's paper, "The Molokai Heart Study," placed first at the ACP meeting in Honolulu in May . . .

In June, renowned surgeon Ralph Cloward was awarded the 1988 Distinguished Alumnus Award by his alma mater, Rush Medical College . . . In September, over 400 friends and colleagues helped Ralph celebrate his 80th birthday at his Diamond Head home . . .

Herb Chinn was surprised to be selected the 1988-89 Model Chinese Father of the Year by the United Chinese Society. Herb's six children include Patricia, a general surgeon in Portland; Herbert K.W., a urologist with his dad; Stephen, a chief resident in urology at Cook County; Barbara, a Delta Air Line flight attendant; Wendy, a post-grad student in Boston; and Eric, a Honolulu attorney. Herb, who received the Hawaii Father of the Year award in 1960 from the Chamber of Commerce, credits Ana, his wife for successfully bringing up the children. "She did it all . . . I was too busy . . ," he admitted . . .

K.Y. Lum's mother, Florence Yun Tsiu Lum, was selected the 1988-89 Chinese Mother of the Year . . . she is the widow of Rev. Kwock Fong Lum and is the model mother of K.Y. the psychiatrist, and K.H., who owns an insurance company . . .

Sportsmen

KMCWC's "Jes Fo' Fun" Golf Tournament was held on a beautiful Tuesday afternoon at Leilehua Golf Course with 32 golfers in A Flight (Hdc 5-13); 29 in B Flight (14-17); 33 in C Flight (18-20); 27 in D Flight (21-36); 14 in Ladies Flight (12-40) and 29 in

(Continued)

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No Handicap Flight . . . The roar of cannons started the tournament promptly at 12:30 p.m. and the pace was relatively fast because of such gimmicks as "Gimme Putts" when the ball entered a chalked circle around each hole . . . As MC Ed Kagihara promised, everyone got a prize . . . Low Gross was repeat winner Leonard Kim and Low Net was Mike Yoneda. High Gross for men was Sam Waxman . . . A Flight winners were: 1st place, Tad Iwanuma with net 65; Don Maruyama and Wayne Nadamoto tied for 2nd. Steven Hirasuna was happy with his 60° pitching wedge (21st place . . . B Flight winners were Eddie Sakamoto with net 65, Ray Wong with net 66 in 2nd, and Douglas Yoshikawa with net 67 in 3rd . . . Eugene Matsuyama and Tom Ito disappointed us by placing 11th and 15th places respectively . . . The juicers in C Flight were Frank Fukunaga with net 65 and Art Salcedo and Paul Tamura tied with net 67s . . . D Flight winners were: Mike Yoneda with net 63 in 1st, George Shimamura with net 67 in 2nd and Michael Light with net 68 in 3rd place . . .

MURPHY'S LAW OF GOLF (By Ed West) Excerpts therefrom. . .

Murphy's Law of Golf: "If anything can go wrong, it will." (Happens to us all the time)

Damon's Law: "The member of a foursome with the most pungent vocabulary will be the first to score a double bogey" (Sounds like Herb Takaki)

Dammit's Law: "The official language of golf is profanity" (Reminds us of Garth Morimoto)

Duffer's Third Law: "The success of a shot varies inversely with the ugliness of the swing that produced it." (Sounds familiar. . .)

First Law of Performance: "A golf round that begins well ends poorly. A golf round that begins poorly ends worse." (That's us. . .)

The Either/Or Law: "On any given round, the better you drive, the worse you'll putt, and the worse you putt, the better you'll drive." (Must be Francis Oda. . .)

Gemza's Definition: "If it gives you enjoyment, it's play; if it gives you relaxation, it's a hobby; if it gives you a nervous breakdown, it's golf." (No wonder our handicap keeps rising . . . And we haven't been sleeping too well lately . . .)

Robbie's Law of Improvement: "Any correction made to your swing works — once." (Reminds us of Frank Fukunaga . . .)

Engle's Law: "To hit a bad approach is human. To blame it on a bad lie is even more human." (Roy Iritani on the Mid Pac 17th)

The Duffer's Maxim: "If your putting is perfect, don't worry, the phase will pass." (We keep hoping with Art Salcedo's putting, but the phase passes only when we're partners . . .)

Ralph B. Cloward 80th Birthday Luau (Sept. 23)

Over 400 friends joined in the festivities . . . Many were faces we had not seen for years and years like Howard Lilestrand, Paul Gebauer, John Lowrey, Rodney West, Sam Allison, Dick Sakimoto, Tom Fujiwara, etc., etc. . . . Good ole overworked neurosurgeon John Lowrey who would make rounds at midnight after operating all day looked healthier and younger than when he retired to oblivion 10 years ago near Kawaihou, Hawaii . . . "I only read the *New England Journal* . . . I don't even have an "MD" after my name back home . . . See you at my first medical meeting in Kona . . ," John said grinning happily. . . Paul Gebauer had also turned 80 . . . Ralph tells the following joke: Paul yelled, "Hey Ralph, I got me a new hearing aid . . ." "What kind is it?" Ralph asked . . . "About 12 o'clock . . ." Paul replied. . .

A prominent neurosurgeon who flew in from Bombay, India, referred to Ralph as "My Guru" — my teacher, my friend, my philospher . . . Jim Marnie described Ralph as a talented workaholic and a practicing Mormon who never took a drink . . . Believe me, he is a teacher . . . I learned from him about the column of Morgagni and that a subarachnoid space is not outer space . . . The bone bank he established by harvesting cadaver bone is still being used . . . He invents new instruments and new surgical procedures . . . Immediately after Pearl Harbor, he worked day and night without rest . . . When the crisis was over, he returned to his 26-hour day. . . Edith Yoshioka, his faithful nurse, has been with him for 50 years . . . How she managed, we'll never know . . . Andy Morgan: "I'm an ole retired urologist (1½ years) and you are still deeply involved in your specialty . . . I remember the long hours you spent doing prefrontal lobotomies . . . You really never age . . . Perhaps the only sign of age is your golf and your hearing . . ." Even Dick Sakimoto got up to the microphone and sang a ditty Ralph had composed when they were together at the University of Hawaii back in 1926 . . . Ralph and his clarinet apparently played for the Royal Hawaiian Band and the Honolulu Symphony while attending UH . . . Neurosurgeon Ray Taniguchi was there because as he says, "I'm a disciple . . ." And we knew why Don Maruyama was there . . . Ralph had done an anterior fusion on him and salvaged his golf game many years ago . . .

Ralph hadn't lost his raunchy humor . . . "I know birthdays and sex don't mix at my age . . . Why waste all that heavy breathing blowing out birthday candles . . ."

Life's Finest Gifts

(An original poem by Ralph Cloward — that fascinating, indefatigable peripatetic internationally renowned teacher whom we reverently call our friend . . .)

"When you get on
and you've lived a lot
and the blood in your veins
isn't quite so hot,
and your eyes are dimmer
than what they were
and the page on a book
has a misty blur
strange as the case
may seem to be
then is the time
you'll clearly see.
You'll see yourself
as you really are
when you've lived a lot
and you've traveled far;
when your strength gives out
and your muscles tire
you'll see what then
to your eyes had hid—
the countless trivial things you did.
For often the blindest
are youthful eyes;
age must come
e're man grows wise.
Youth makes much
of the mountain peaks,
the strife for fame
and the goal he seeks,
but age sits down
with the setting sun
and enjoys the useful
deed he's done.
You'll sigh for the friends
that were cast aside
with a hasty word
or a show of pride,
and you'll laugh at medals
which you prize
because you'll see them
through different eyes.
You'll understand how little
they really meant
for which so much
of your strength was spent.
You'll see as always
an old man sees,
that the waves die down
with the fading breeze,
and the pomps of life
never last for long,
the great sink back to
the common throng,
but you'll understand
when the struggle ends
that the finest gifts
in life are friends!"

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CANCER INFORMATION SERVICE

Conservative Cardiology

(An Irwin Schatz lecture at Mabel Smyth, May 5, 1988)

Summary:

1) Thrombolytic therapy is unnecessary in inferior MIs. . .
2) Too many angiographies are being done. . .
3) Too many PTCAs are being done. . .

Warning:

Cardiology is out of control. . .
Beware of a collusion of anonymity (i.e., the involvement of multiple physicians)
Cascades in cardiology (i.e., tests lead to other tests)
Watch for conflicts of interests (i.e., the same physicians get paid for procedures)

Caveats & Principles (Gratuitous)

a. Technology is not an end to itself. . .
b. Just because a procedure *can* be done does not mean it *should* be done. . .
c. A pharmacologic effect is not a surrogate for a clinical benefit. . .
d. Beware of the news media. . .
e. Beware of the term, "it is not the standard of practice."
f. Read advertisements carefully. . .
g. Assess carefully the peer literature. . .
h. Ask the right questions. . .

Pharmacological Agents After Myocardial Infarction

(Summary of lecture by Osamu Fukuyama, Aug. 29, 1988, at Mabel Smyth)

1) *ASA* is probably indicated for all patients with MIs (Q-wave and non-Q-wave), in acute and chronic phases. . .
2) *Beta-blockers* are recommended for patients with Q-wave MIs in acute and chronic phases. . .
3) *Diltiazem* is recommended for patients with non-Q-wave MIs in the acute phase. . .
4) *Heparin/Coumadin* are indicated in certain subgroups of patients (mostly Q-wave MIs) in acute and chronic phases. . .
5) Reduction of risk factors (including use of lipid-lowering agents, if necessary) is indicated for *all* patients. . .
6) Routine uses of nitrates, calcium channel blockers (except for diltiazem in non-Q-wave MIs, acute phase), and anti-arrhythmic agents are not recommended. . .

Suggestions for Snorers

(Courtesy of Ed Morgan)

Adopt an athletic lifestyle and exercise daily to develop good muscle tone and to lose weight.

Avoid alcoholic beverages within three hours of retiring.

Avoid tranquilizers, sleeping pills, and antihistamines before bedtime.

(Continued)

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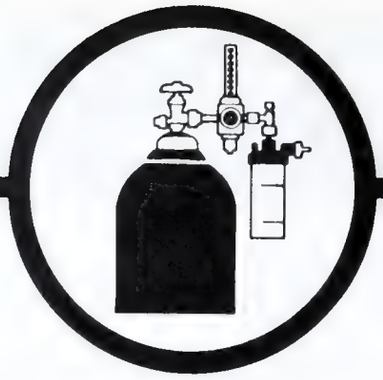
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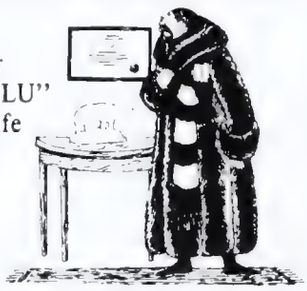
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Sleep sideways rather than on your back. (Sew a tennis ball into a pocket in your pajama back.)

Tilt the entire bed with the head upward: Place a brick under the bedpost at the bedhead.

Try wearing a whiplash collar at night to keep your chin extended, and avoid use of a thick pillow that would kink your neck.

Drink a cola or cup of coffee before you retire so your companion can get to sleep first.

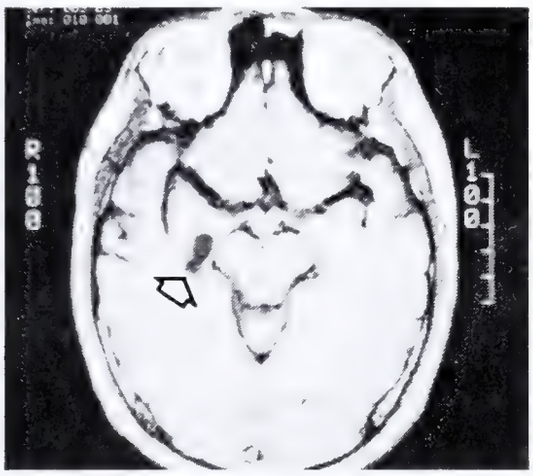
(Snoring-related complaints in 101 patients:)
Drives wife from bedroom (18)
Drives roomate (3), husband (2) from bedroom
Girlfriend won't marry him (3)
Boyfriend has "had it" with her
Keeps wife awake (5)
Disturbs wife (2)
Frightens wife
Drives wife crazy
Troubles everyone in house
Even dog gets up and leaves when patient snores
Wife and son harass him unmercifully
Is the big joke to grandchildren
Feels ostracized
Children are intolerant (4)
Is terribly embarrassed at campouts
Is terribly embarrassed at slumber parties
Is terribly embarrassed in dormitory
Is intolerable to associates on business trips (4)
Had to leave the boat for friends to sleep
Shakes entire house
Can be heard through two walls (6), upstairs and downstairs (2)
Snores so loudly at movies and church they ask him to leave
Kicks and flails (2), struggles, shouts, sleepwalks
Cannot sleep restfully, shakes the bed
Snoring is intolerable
Has morning headaches (3)
Is drowsy all day (4)
Falls asleep on the job (4)
Falls asleep driving car (9)
Falls asleep driving and struck a phone pole
Falls asleep waiting for red light to change (3)
Falls asleep watching TV
Falls asleep eating dinner
Falls asleep talking to wife
Cannot drive at night
(Fairbanks, Snoring, 9, 1987)

MRI CASE OF THE MONTH

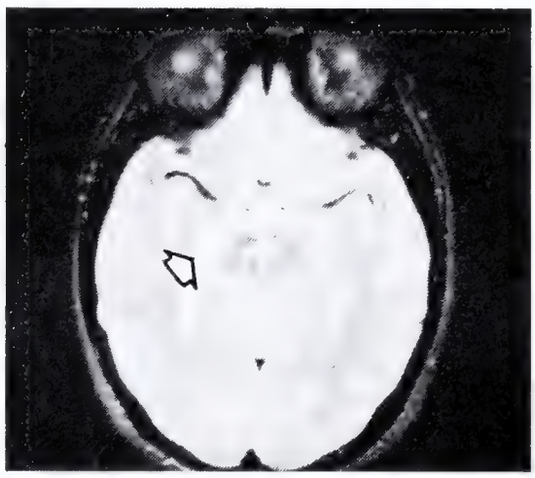
ARACHNOID CYST

Clinical History: Twenty-one year old male with mental status change with non-enhancing cystic lesion on CT scan in the right temporal horn.

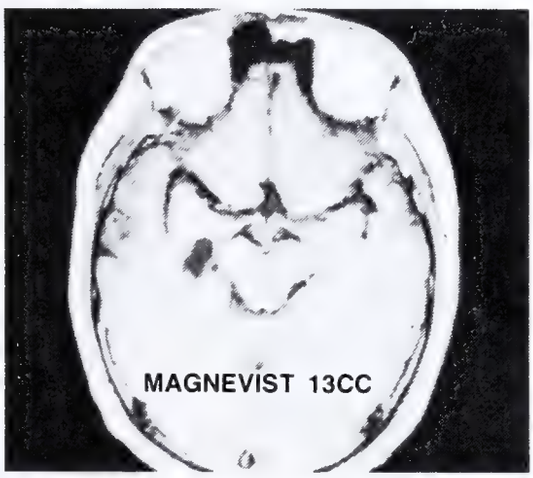
#1 (T-1)



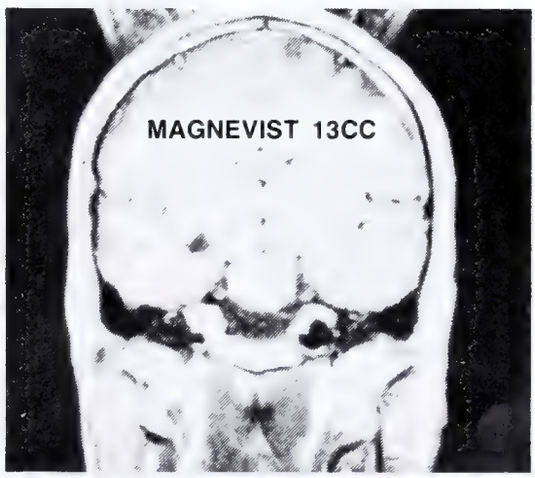
#2 (T-2)



#3



#4



These images were produced by MRI Center of the Pacific using their 1.5 Tesla GE Scanner.

Radiologic Diagnosis: T-1 and T-2 weighed transaxial images (images 1 and 2) reveal the presence of a cystic lesion in the right temporal horn. Following Magnevist administration (images 3 and 4) there is no significant enhancement of this lesion consistent with arachnoid cyst..

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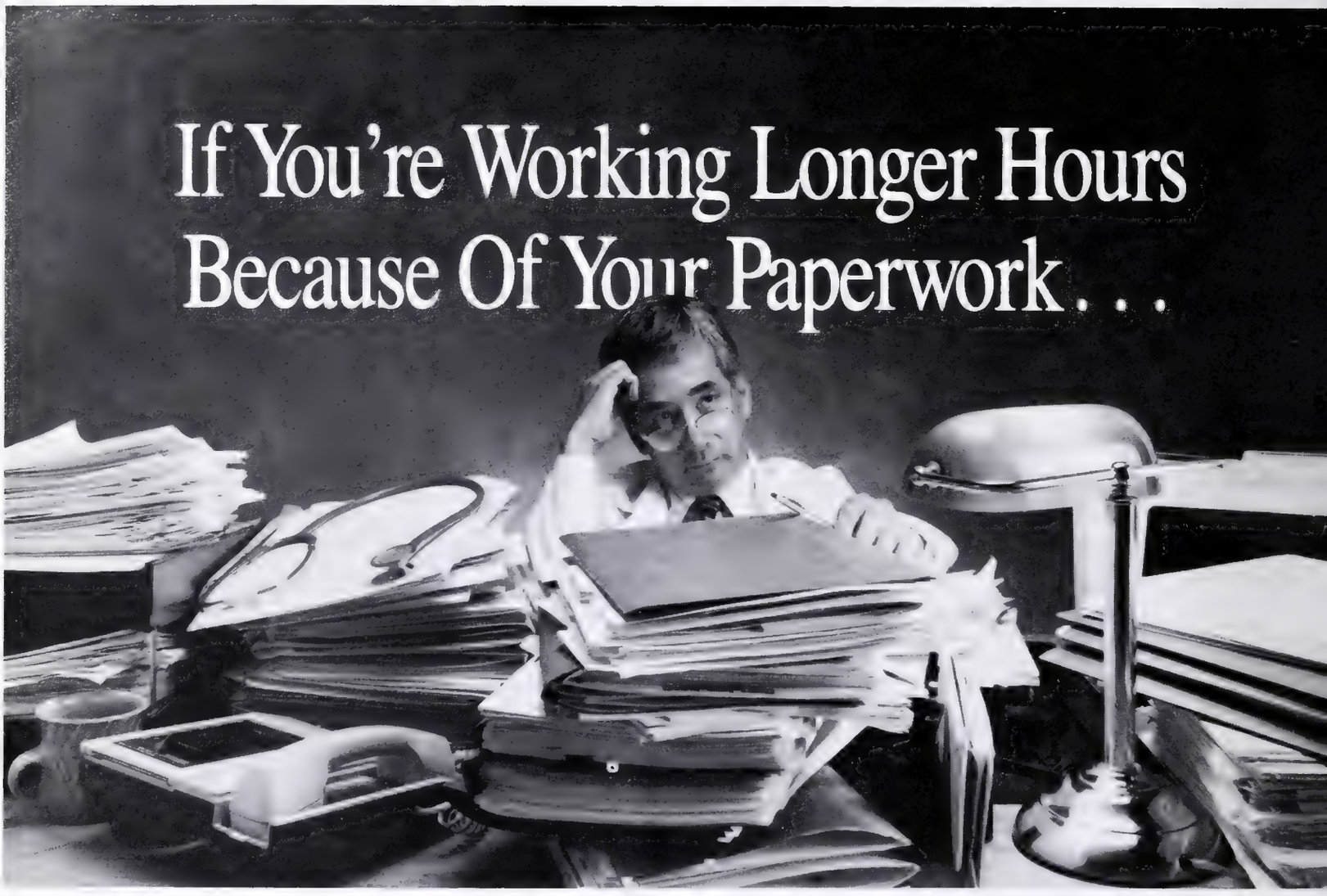
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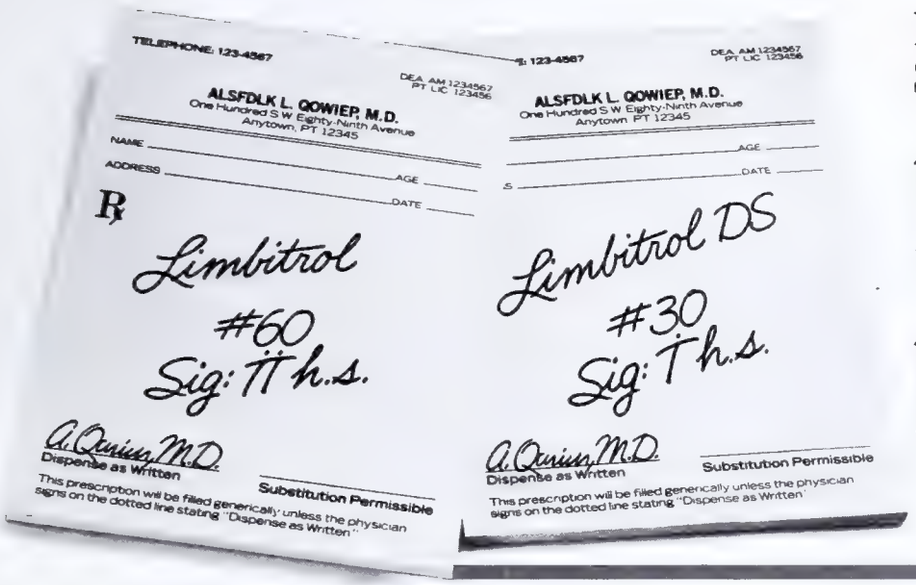
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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **2.** Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.
Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

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In the depressed and anxious patient

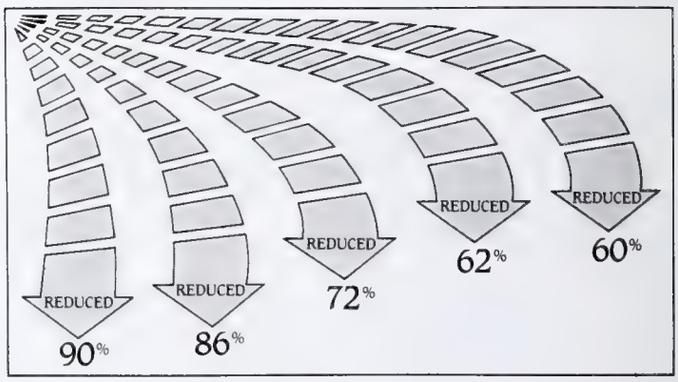
See Improvement In The First Week...[1]

And The Weeks That Follow

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- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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*Patients often presented with more than one somatic symptom.

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Isoniazid overdose

We are pleased to include in the pages of the HAWAII MEDICAL JOURNAL case reports and research done by resident housestaff physicians in the John A. Burns School of Medicine Integrated Residency Program.

In this issue, Andrew C. Dixon, MD, et al. give us a case report of an overdose of isoniazide. Dixon introduced it to us as follows: "The use of isoniazide is increasing because of tuberculosis and the increase in *Mycobacterium avium intra-cellulare* afflicting patients with AIDS. We feel this case is a classic example of the toxicities found with the ingestion of isoniazide. The Hawaii medical community could benefit from the information derived."

We agree wholeheartedly.

J.I. Frederick Reppun, MD
Editor

The Living Will

We have more than a Minotaur in our midst! Lawrence L. Heintz, PhD, of Hilo, must have the head of an ethicist, the body of a philosopher and the tail of a lawyer! He has provided our readers with a most thorough, well-thought-out and clearly expounded analysis of the physician's dilemma when it comes to Living Wills.

It is in this issue of the HAWAII MEDICAL JOURNAL that we have his article, "Hawaii's Nutrition and Hydration Fix."

Not only has Heintz done a detailed case study of the laws of the land on the subject, but he has also met with HMA's Medical, Moral, Ethical and Legal Concerns Committee before putting his research into words on paper.

The treatise speaks for itself. However, we cannot help commenting that our legislators, in their wisdom, often come up with language that gives lawyers a lot of business! In this instance, it is the recently enacted Medical Treatment Decisions Act of 1986.

Incidentally, by "fix," Professor Heintz means "remedy," we think.

J.I. Frederick Reppun, MD
Editor

HAMSA

The Hawaii Chapter of the American Medical Student Association (AMSA) has as its president a very active student of the John A. Burns School of Medicine at the University of Hawaii. His name is Carlos Abeyta and he is also a student member of the Hawaii Medical Association's Council.

Under his direction, the Hawaii Chapter this year, for the first time, was host to the AMSA Convention of Region X, known as the Western Region, November 3 through 5. The scientific program held at both Mabel Smyth and the HMA building, was titled *Cross Cultural Caring and Medicine in the Pacific.* The two-day program of lectures was impressive in its local breadth and color.

The Convention started off with a gathering and dinner at the Pacific Beach Hotel in Waikiki, to which several of the leadership of the HMA were invited, as well as the Medical School's faculty, and the speakers at the Conference. In attendance were 55 medical students from the West Coast; the Hawaii Chapter numbers some 25 members.

National AMSA president Cindy Osman, MD, no longer a medical student and taking a year off from residency training, gave a rousing ad-

(Continued on page 580)

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ESSAY

A.D.2005: The President calls for deregulation of the medical profession

David B. McEwan, MD*

While virtually all businesses are being deregulated by the federal government, the medical profession is being increasingly "regulated." I can see the headlines above as they will appear in the year 2005, when it becomes clear that the government will have failed once more.

The list of organizations that have had an adverse impact on our practices and on our philosophy of medicine in and since 1987, is evergrowing. Federal and state governments, hospitals, business corporations and insurance companies all possess boundless imagination, unlimited amounts of leverage capital and media budgets when it comes to their insidious planning to control, curtail and monitor every component of what we do. This requires us to have more staff and a larger overhead expense in order to satisfy them and to complete their many forms. In essence, they are destroying our profession's independence, freedom of action and the ability to provide the quality of care that our society has come to expect.

It is evident that the destinies of physicians are being forged by politicians, civil servants, private insurers, HMOs, IPAs and PPOs, as we passively sit and hope that it is not really happening. We no longer deal simply and directly with our patients — and succeed or fail on the basis of our skills. Our traditional, time-proven, caring and supportive roll as the patient's advocate, our bond with the patient and his or her family unit is fast disappearing.

An adversary role is developing as we service corporations instead of patients. Masses of patients become bargaining chips without their knowledge. Everything must be appraised by a third party; the patient and doctors be damned! Despite disclaimers to the contrary, real quality care will fade away; the marketing of its perception is all that matters. This is a very sad outcome for everyone.

Individual physicians, as well as small and large medical groups, collectively, have limited resources and have little recourse for resistance; we have little opportunity for meaningful appeal of the decisions handed down by corporate providers in the marketplace. The latter know that we are overburdened with the providing of medical care, that we are often poor business monitors and developers, that we will traditionally place the welfare of the patient ahead of profit — to the point of there being no "profit" at times — too busy to be involved with the marketplace. Now, it is a matter of profit for the "mother company" that must come first, because it, the corporate provider, must distribute yearly dividends to the stockholders.

I remember arriving in Hawaii in 1977 and predicting that socialized medicine is coming; many physicians had difficulty figuring out what I meant by that. Well, I say now that it is just around the corner.

Several private insurance companies, with the approval of the federal government, will regulate and control health care. And, just like the British and the Canadian MDs, we will most likely do nothing about it until it is too late, and then be wishing that we had.

As teachers, college professors and nurses already have done, it is time we create an independent collective bargaining organization with a unified, dignified voice focused on resolving the problem of our inevitably becoming employed professionals. Then, perhaps, we might be able to hear the response of the feds in the year 2005 — realizing that they made a big mistake — calling for "deregulation", calling for the "good old days of 1987." The opportunities are now. In a few years it will be too late.

We need to create the future, not wait for it to be created by others for us and our patients. *The alternative: To lose all control over our profession; all we need to do is to do nothing.*

To whom should we turn for help? The Hawaii Medical Association? The Hawaii Federation of Physicians and Dentists? Or to ourselves, to each and every one of us?

* Chief, Department of Family Practice
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- **Convenient *B.I.D.* dosage – 250 mg, 500 mg and 750 mg tablets**

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†**Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

CIPRO® SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

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BRIEF SUMMARY
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INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis.*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General: As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Quinolones may also cause anaphylactic reactions and cardiovascular collapse. Anaphylactic reactions may require epinephrine and other emergency measures.

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions: Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients: Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C: Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg q12h
Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg q12h
Urinary Tract*	Mild/Moderate	250 mg q12h
	Severe/Complicated	500 mg q12h
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg q12h

Nursing Mothers: It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum

Allergic reactions ranging from urticaria to anaphylactic reactions have been reported.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

***Due to susceptible strains of indicated pathogens.**
See indicated organisms in Prescribing Information.

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C09858A MLR-558

Human Brucellosis in Hawaii

Sukchai Satta, MD*

Human brucellosis is an infection caused by one of the three species: B. melitensis *(goats),* B. suis *(hogs), and* B. abortus *(cattle). Brucellosis commonly afflicted abattoir employees. In previous reports of patients with brucellosis, 10% to 71% were abattoir employees[1]. The following reported case of brucellosis occurred in a ranch hand and was probably acquired from contact with a wild pig.*

Case Report

A 23-year-old Portuguese man, a ranch hand from the Big Island, was seen in the office for fever, headache and bodyache of two weeks' duration. The patient recalled that he had gone wild pig hunting about two months prior to this illness and had slaughtered and buried a sick, wild pig. He also recalled that he had a cut on his hand during that time.

He was treated initially for possible influenza or sinusitis. He returned a month later with the same symptoms. At this time, blood tests were done. Brucella agglutination test was positive 1:160 (normal less than 80). Blood culture reported later was positive for *Brucella suis.* He was treated with tetracycline 2 grams daily in divided doses for three weeks. The patient improved and remained afebrile and asymptomatic for four months thereafter.

Four months later he was seen again for similar symptoms: Fever, chills, headache and bodyache. The patient was subsequently admitted to the hospital for a more extensive workup and treatment. On examination his fever was 101.4 F. He had suffusions of both eyes, eye ache and headache, but his neck was supple. Cardiac examination showed normal sinus rhythm and no cardiac murmur. Abdomen: Liver was palpable two fingerbreadths below the costal margin, smooth and nontender. Spleen was not palpable. In the left axilla, there was a shotty, tender lymph node palpable.

The positive laboratory results were: WBC 5,100 with 20% segmented forms, 16% hands, 61% lymphs, 5% monos. Sedimentation rate was 25 mm/hr. Liver function tests were: SGOT 45, alk. phos. 9.6, LDH 236, SGPT 45. Agglutination test for brucellosis was positive 1:160. Blood culture, done by the Department of Health later on, was again positive for *Brucella suis.*

This time the patient was treated with tetracycline 2 grams a day in divided doses for six weeks. Streptomycin, 1 gram daily from day 1 to day 6 and from day 8 to day 13 was given by injection.

Two months after completion of therapy, a repeat blood culture was negative, but the agglutination test for brucellosis remained positive at 1:160. The patient remained afebrile and asymptomatic during the two-month follow-up period.

The patient was seen three years later for other medical problems but he was free of brucellosis symptoms.

Discussion

This patient gave a very specific history of contact with a sick, wild pig and then developed symptoms of brucellosis about two months later. The blood culture was positive for *B. suis.* He recalled that he went hunting alone; he didn't know if any of his fellow employees had developed similar symptoms. There were no reports of Brucella outbreaks in Hawaii during that period of time: December 1980 to May 1981.

The patient had a recurrence of brucellosis four months later but denied any contact with a wild pig again during the interval. A second course of treatment with tetracycline for six weeks, plus streptomycin for two weeks, seems to have produced a cure.

The recommended treatment for brucellosis with tetracycline is for three to six weeks[2]. Streptomycin, 1 gram a day for two weeks is also recommended in severe cases.

Our case demonstrated that three weeks' therapy of brucellosis with tetracycline probably was insufficient because of the relapse. Six weeks' therapy with tetracycline plus streptomycin for two weeks appears to be the appropriate treatment in brucellosis.

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Kealakekua, Hawaii 96750

REFERENCES

1. Buchanan TM et al.: Brucellosis in the United States, 1960 to 1972 and abattoir associated disease, *Gen Med* 53:403-1974.
2. Brucellosis. Medical Staff Conference, University of California, San Francisco, *West J of Med* 122: 232-237, March 1975.

Isoniazid overdose: A case report

Andrew C. Dixon, MD*
Lois Shikuma, PharmD**
Douglas A. Duvauchelle, MD***
Daniel S. Rappaport, MD***
Jeffrey W. Nakamura, MD****

Isoniazid is a widely used drug for the treatment and prophylaxis of tuberculosis. Numerous case reports have been published of both accidental and intentional isoniazid overdose resulting in a seizure disorder and severe metabolic acidosis. Most of these reports, however, fail to report pharmacokinetic data, with particular reference to the rate of elimination and acetylator status of the individuals involved. We present the case and pharmacokinetic data of a patient who was admitted to our hospital with an isoniazid overdose.

Case Report

A 19-year-old Chinese man, a recent immigrant, was admitted to the hospital in status epilepticus. He had previously been taking isoniazid prophylactically for a positive PPD skin test, and the empty bottle had been found beside him by the Emergency Medical Intensive Care Technician squad. In the emergency room, the patient was intubated and received nasogastric lavage followed by activated charcoal administration. In addition, he was given naloxone, dextrose and intravenous diazepam for the seizures. Initial laboratory data revealed arterial blood gases on supplemental oxygen of pH 6.61 pC02 26 and p02 171. The anion gap was unable to be calculated because of concommitant bicarbonate administration. A mild coagulopathy was also noted.

The patient was managed with large doses of sodium bicarbonate for his metabolic acidosis; a total of 18 gm of intravenous pyridoxine was given with rapid resolution of the tonic-clonic seizures. His coagulopathy rapidly improved after 2 units of fresh frozen plasma were given. The patient gradually improved from what was thought to be a metabolic encephalopathy and he was extubated on his second hospital day. The hospital course was subsequently complicated by an aspiration pneumonia (which required antibiotic therapy) as well as a transient elevation in his hepatic transaminases. The patient was ultimately discharged home in excellent condition.

An isoniazid level obtained upon admission was 66 ug/ml. Eighteen hours later the level had fallen to 0.7 ug/ml and then to an undetectable level soon thereafter.

Discussion

This case illustrates a number of important features of isoniazid overdose. The profound severity of the metabolic acidosis, with neurological recovery, has been previously reported[1]. The acidosis, which is predominantly a lactic acidosis, is thought to be primarily caused by the seizure activity. In addition it is thought that isoniazid itself can cause a lactic acidosis by interfering with nicotinamide-adenine dinucleotide (NAD), which is necessary for the conversion of lactate to pyruvate[2]. The magnitude of this effect in contributing to the systemic acidosis is unknown.

Seizures are also a frequent complication of isoniazid overdose. A lowering of the seizure threshold is observed with doses of isoniazid above 15 mg/kg, although seizures are more commonly observed in doses greater than 35 mg/kg. Prior to the recognition of pyridoxine as an effective antidote, severe seizures and a high fatality rate were observed in cases of ingestion 80 to 150 mg/kg[3]. The toxicity of isoniazid is related to its effect on depleting brain gamma-aminobutyric acid (GABA) levels. The enzymes responsible for the production of GABA (glutamic acid decarboxylase), and for its degradation (gamma-aminobutyric acid transaminase) both require pyridoxal-5-phosphate as a coenzyme[2]. This coenzyme is

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the active form of pyridoxine (vitamin B6), and its activity is inhibited by isoniazid. In addition, isoniazid depletes the body stores of pyridoxine by increasing its renal excretion.

In 1981, Wason et al. demonstrated that by administering intravenous pyridoxine one could terminate the seizure activity and shorten the duration of coma in patients with isoniazid overdoses[4]. They did a retrospective literature review of 41 cases, which showed that 60% of patients who had not received pyridoxine had prolonged seizures. Of those patients that had received a dose of pyridoxine equivalent to less than 10% of the ingested isoniazid, 47% exhibited prolonged seizure activity. Patients who received 10% to 50% pyridoxine had a prolonged seizure rate of 11%, and those that received pyridoxine replacement on a gram-for-gram ratio had no recurrent seizures. In addition, they further showed that a decrease in the depth of coma was found within two hours of pyridoxine administration. Because of this study, the use of pyridoxine in a gram-for-gram dose for ingested isoniazid has now become the standard of care in overdose situations.

Isoniazid is metabolized by acetylation in the liver to form acetylhydrazine. It is the metabolites of the acetylhydrazine that bind to liver microsomal protein and cause the hepatic toxicity of isoniazid[5]. The activity of the acetylation pathway is genetically determined, with patients being divided into rapid and slow acetylation status. Slow acetylators are homozygous for the recessive gene, whereas rapid acetylators may be either homozygous or heterozygous for the dominant gene. Only 10% to 20% of Oriental people are slow acetylators, compared with 50% to 60% of a white or black population[2]. The isoniazid elimination half-life (T-½) for slow acetylators is reported to be 110-455 minutes, and 35-110 minutes in fast acetylators[6]. One report demonstrates that more severe liver dysfunction occurs in rapid acetylators, presumably because those metabolites of isoniazid that are hepatotoxic are more rapidly formed and can therefore be found in higher peak serum concentrations[5]. Insufficient data exists as to whether acetylator status affects the neurological complications and outcome of patients with a large ingestion of isoniazid. Figure 1 shows the serum isoniazid levels obtained in our patient. The half-life calculated in this patient was 170 minutes, which makes him a slow acetylator, which is somewhat uncommon for his ethnic background.

Besides the use of pyridoxine, the treatment of isoniazid overdose is largely supportive. Several studies have looked at the use of activated charcoal for decreasing the gastrointestinal absorption of isoniazid. Activated charcoal appears to reduce absorption only when given concomitantly with the ingestion of isoniazid. When it is given one hour later, the amount of isoniazid absorbed was unchanged[6,7]. Insufficient data is available concerning the use of dialysis in severe overdoses, however, case reports have suggested it may improve the clearance of the drug[3].

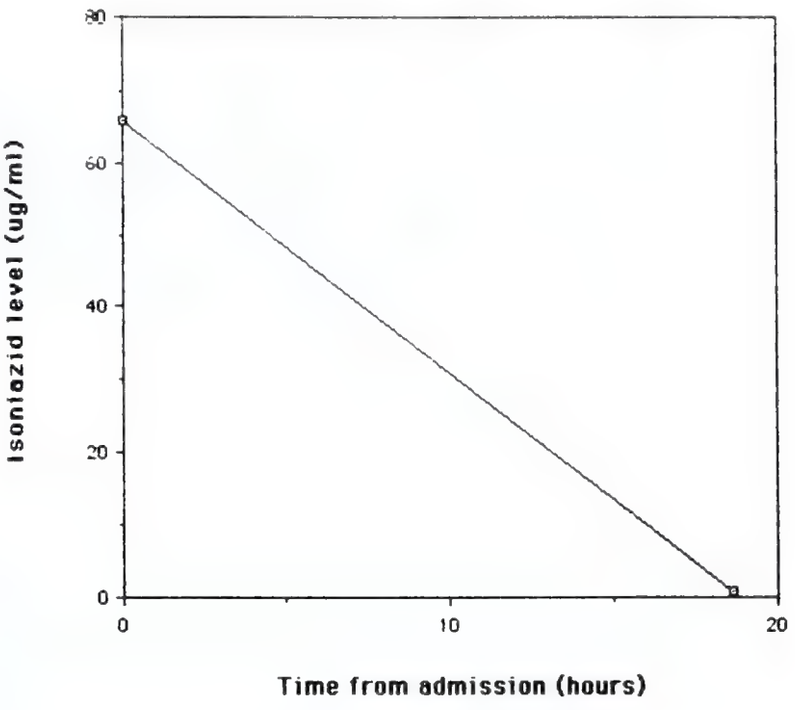


Figure 1: Serum isoniazid elimination curve.

Summary

Isoniazid overdose is an uncommon though severe cause of metabolic acidosis and seizures, but also one for which a simple antidote is known. Early recognition of its consequences in the emergency room setting will doubtlessly lead to improved morbidity and mortality rates. The early use of appropriate doses of pyridoxine dramatically improves outcome. However, continued data accumulation is necessary to provide answers as to whether dialysis or other therapy will further assist in the treatment of these individuals.

REFERENCES

1. Hankins DG, Saxena K, Faville RJ, and Warren BJ: Profound Acidosis Caused by Isoniazid Ingestion. *Am J Emerg Med* 5(2):165-166, 1987.
2. Wason S and Lovejoy KH: Isoniazid. In *Clinical Management of Poisoning and Drug Overdose.* Eds. Haddad, LM and Winchester, JF, 1983, W.B. Saunders Co., Pa.
3. Orlowski JP, Paganini EP, and Pippenger CE: Treatment of a Potentially Lethal Dose Isoniazid Ingestion. *Ann Emerg Med* 17:127-130, 1987.
4. Wason S, Lacouture PG, and Lovejoy FH: Single High-Dose Pyridoxine Treatment for Isoniazid Overdose, *JAMA* 246(10):1102-1104, 1981.
5. Yamamoto T, Suou T, and Hirayama C: Elevated Serum Aminotransferase Induced by Isoniazid in Relation to Isoniazid Acetylator Phenotype. *Hepatology* 6(2):295-298, 1986.
6. Siefkin AD, Albertson TE, and Corbett MG: Isoniazid Overdose: Pharmacokinetics and Effects of Oral Charcoal in Treatment. *Human Toxicol:* 6:497-501, 1987.
7. Scolding N, Ward MJ, Hutchings A, and Routledge PA: Charcoal and Isoniazid Pharmacokinetics. *Human Toxicol:* 5:285-286, 1986.

Hawaii's nutrition and hydration fix: Will it be medico-moral, judicial or legislative?

Lawrence L. Heintz, PhD*

Hawaii's Medical Treatment Decisions Act of 1986 recognizes the patient's role in health-care decisions but presents the community with a fundamental conflict over the patient's right to refuse nutrition and hydration. The conflict is a stark one. I will argue that Hawaii's law excludes nutrition and hydration from the interventions that one is able to refuse by use of a Living Will in Hawaii. This legislative posture is set against the constitutional and long-established common law right of refusal that has been upheld in the courts[1], asserted in the literature of medical ethics and affirmed by the medical community[2].

The Problem

The statute provides for refusal of medical interventions by declaring that ". . . the laws of the State of Hawaii shall recognize the right of an adult person to make a written declaration instructing his or her physician to provide, withhold, or withdraw life-sustaining procedures in the event of a terminal condition"[3]. "Life-sustaining Procedure" is in turn defined as ". . . any medical procedure or intervention *except for the provision of fluids, nourishment, medication, or other procedures necessary for patient comfort or pain relief,* that when administered to a qualified patient, will serve only to prolong the dying process"[4] (emphasis is mine). The logical force of the exception clause is that for the purposes of the law the interventions listed are not life-sustaining procedures and thus cannot be withheld or withdrawn. Thus the Medical Treatment Decisions Act does not recognize the refusal of fluids and nourishment.

But this is not the end of the matter. The basis of the right to refuse treatment is more fundamental than the laws of the State of Hawaii. Hawaii's statute is at odds with the philosophical, common law, and constitutional traditions of this country. Furthermore, those traditions have been invoked to override restrictive legislation much like Hawaii's on this very same question in every state in which the issue has been addressed in the courts[5].

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The track record of state appellate level courts is extremely clear. If we place much stock in the judicial record, then a strong case can be made that patients have a right to refuse fluids and nutrition despite the Hawaii Statute. Moreover, if we are to support patients and defend their rights, then it is merely a matter of time before physicians in Hawaii will face the conflict between the provisions of Hawaii's law and a patient (or his advocate) who chooses to exercise his rights.

What is a physician to do in the case of a patient who persists in his refusal of nutrition and hydration? What if that refusal is expressed in a Living Will? How is a hospital representative to act when faced with such a patient or patient's Living Will? How is a patient advocate or hospital ethicist to act in such a case?

My reflections may not lead all to the same answers to these questions, but my conclusion that we need a legislative fix is likely to be seen as reasonable by all.

Interpretive Ingenuity?

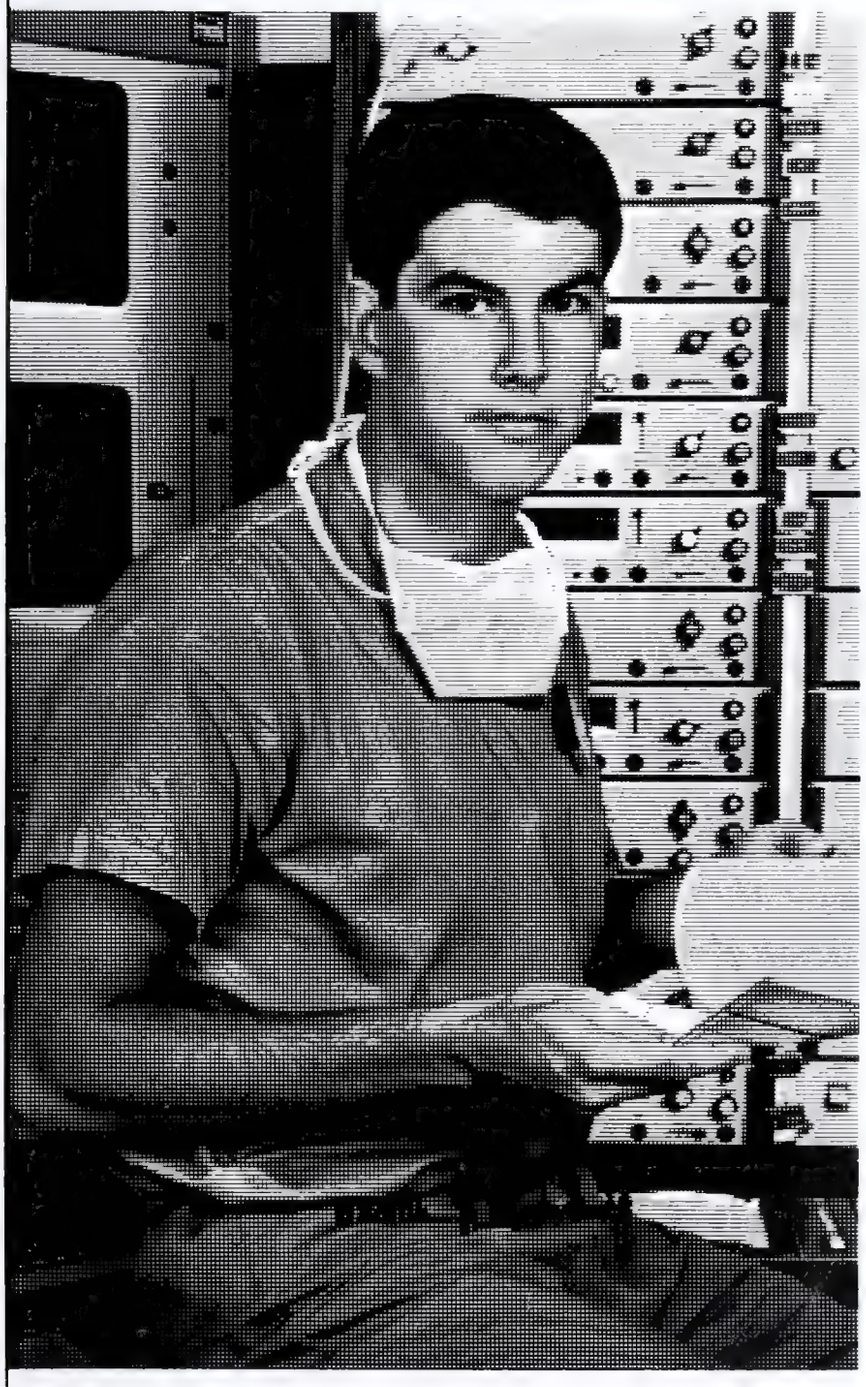
Could it be that the Legislature did not really mean that patients could not refuse provision of fluids and nourishment? Did it only mean that one could not refuse fluids and nourishment that is necessary for pain relief? Hence, we are to read the "exception clause" as saying that one cannot refuse palliative measures of any sort and we are to read ". . . provision of fluids, nourishment, medication . . ." as examples of palliative measures. Thus, this leaves open the alternative that we can refuse fluids, nourishment and medication that do not provide comfort care.

The only other occasion where the "fluids and nourishment language" is used in the statute is in the sample of a written declaration (Living Will). While the law is clear that the Living Will need not follow this form or language, nonetheless, let us review the language. The operative section reads as follows:

> "If at any time I should have an incurable or irreversible condition . . . and where the application of life-sustaining procedures would serve only to prolong artificially the dying process, I direct that such procedures be withheld or withdrawn, and that I be permitted to die

(Continued)

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Beyond the call

naturally *with only the administration of medication, nourishment, or fluids or the performance of any medical procedure deemed necessary to provide me with comfort or to alleviate pain.*"[6]. (emphasis added.)

Notice that this sentence could easily end with ". . . die naturally." What is added by the "with only" clause? A natural reading is that the author wants his medication, nourishment and fluids to be continued. In addition he wishes "the performance of any medical procedure (including surgical) deemed necessary to provide" comfort and pain relief. While we might find this language awkward, its meaning is quite clear.

However, there are those who would offer the interpretation that what is added by the "with only" clause is a list of methodologies for comfort and pain relief. That is, we are to read "administration of medication necessary to provide me with comfort or to alleviate pain," "nourishment to provide me with comfort or to alleviate pain," and similiarly with "fluids," "medical procedure" and "surgical procedures to provide me with comfort or to alleviate pain." On this interpretation, when such measures are not palliative measures, they could be refused. This interpretation would have us believe that the legislature meant only to deny the refusal of fluids and nutrition that are given for pain relief. But is this what the law says?

Bad Grammar?

Grammarians find little difficulty in determining what the law says in its definition of "life-sustaining procedure." They will tell you that the passage is clear, not ambiguous. The grammarians' lesson is worth hearing[7].

The statute reads: "Life-sustaining procedure means any medical procedure or intervention *except for the provision of fluids, nourishment, medication, or other procedures necessary for patient comfort or pain relief,* that when administered to a qualified patient, will serve only to prolong the dying process." The italicized portion of this sentence indicates that *neither* the provision of fluids *nor* nourishment *nor* medication *nor* other procedures necessary for patient comfort or pain relief are to be considered under the terms of the rest of the sentence. The word "or" (italicized in the above passage from the law) is a "coordinating conjunction . . .," which means that it connects words, phrases, or clauses that are of equal rank. In this sentence "or" connects four grammatically equivalent structures: (1) Fluids, (2) nourishment, (3) medication and (4) other procedures necessary for patient comfort or pain relief.

The statute says that "Life-sustaining procedure" means the administration to a qualified patient any medical procedures or intervention that will serve only to prolong the dying process. Specifically excluded in this definition are the provision of fluids, nourishment, medication or other procedures that are needed for patient comfort or pain relief.

Whether we philosophically agree with the position that respects the patient's right to refuse fluids and nourishment, is not the issue. The issue at this point is "What does the statute say?" The grammarians tell us that this key passage in the law can only be read in the restrictive way; the "non-restrictive reading" not only demonstrates interpretive ingenuity, it is grammatically incorrect.

Semantics

Sometimes bad grammar forces us into semantic exercises. The statute's definition of "life-sustaining procedure" is a case in point. Consider the definition again:

> "Life-sustaining procedure means any medical procedure or intervention *except for the provision of fluids, nourishment, medication, or other procedures necessary for patient comfort or pain relief,* that when administered to a qualified patient, will serve only to prolong the dying process" (same as 4).

If we follow the grammarians, then nothing in the exception clause (italicized above) can be refused, withheld, or withdrawn. We can understand that the Legislature might want to deny the refusal of fluids, nutrition, or procedures necessary for patient comfort or pain relief. But how could they be denying the "refusal of medication"? They must not mean what they say!

To make sense out of the statute, it must mean "medication necessary for patient comfort or pain relief." The Legislature must have been dividing medication into two categories: (a) That which provides comfort and pain relief, and (b) all other medication. Given this distinction, it then excluded medication that provides comfort and pain relief from life-sustaining procedures that one can refuse by use of an advance directive. It may be a rare patient who wishes to refuse such medication, but nonetheless, the Legislature is not going to be a party to allowing patients to be uncomfortable and in pain! Surely it did not mean to deny the right of patients to refuse "any and all medication," for that would be a formula for a constitutionally invalid law. In order to make sense out of this definition, we must override the grammar at least to the point that the prepositional phrase, "for comfort or pain relief," modifies "medication" in this definition.

Now then, does the same argument apply to fluids and nutrition? Did the legislature have two kinds of fluids and nutrition in mind: (a) One for comfort and pain relief and (b) the other for sustenance? Let us assume that it did, and see where this line of reasoning takes us. The argument is that the statute allows one to refuse fluids and nutrition that is for sustenance, but does not allow one to refuse fluids and nutrition that is for comfort and pain relief. It seems extremely odd that the Legislature would refuse to be a party to allowing the "rare patient" to refuse fluids and nutrition, and thereby create discomfort and pain for himself, while at the same time it would allow patients to refuse fluids and nutrition that provide sustenance in those cases where such refusal would not be painful.

Not only is such an interpretation contrived, but also it goes against the explicit words of the authors of the legislation. During the hearings on this legislation it was

(Continued)

repeatedly pointed out that fluids and nutrition are medical interventions and therefore within the patient's common law and constitutional right of refusal. But the authors of the legislation decided to diminish the objections to the legislation and disallowed the refusal of artificial feeding. They minced no words when they said: "The bill will not permit the starving of a patient[8]." Now we are asked to interpret the bill to say that it allows refusal of fluids and nourishment that is provided for sustenance, but does not allow refusal of fluids and nourishment that is provided for comfort and pain relief.

If the statute does not permit the starving of a patient, how can one refuse fluids and nutrition that provides sustenance? This argument not only exposes interpretive ingenuity, but also inconsistency in the "non-restrictive" interpretation. Under the non-restrictive interpretation, hydration and nourishment cannot be refused when it is employed as a palliative measure. And from above, we see that the Legislature explicitly denies refusal of hydration and nourishment that is provided for sustenance. Hence, fluids and nourishment, whether for sustenance or for comfort or pain relief cannot be refused under this legislation.

If this argument is sound, then my conclusion that the statute does not allow the refusal of fluids and nutrition stands on firm ground. However, I would be the first to admit that while philosophers might be able to argue this out and come to eventual agreement, the problem of the lack of a conclusive interpretation remains unsettled for patients, physicians and hospitals. I am sorry to say that poorly written legislation can only be fixed up in the courts or in the legislature.

More Ingenuity

For those who are unhappy with this outcome, there are other alternatives. Another approach is to first focus on Section 22 of the law, "Preservation of Existing Rights," and then consider the entire statute as one way to exercise one's right to refuse treatment[9]. That is, the Legislature provided a set of rules and requirements in its enabling legislation that must be followed IF one follows the legislative option. If one decides to "go with" one's existing rights to refuse treatment, the statute does nothing to restrict those rights. Exercising this option, one could ignore the restrictions and procedures specified in the legislation.

Some find these "less restrictive" interpretations not only plausible but also persuasive[10]. I find them to be neither, but even if they were plausible, that is not good enough. They are not workable. Physicians and people interested in Living Wills cannot act with confidence in this situation. Given this state of affairs, the law and one's Living Will have not alleviated the fears of loss of control at the end of one's life, but have aggravated those fears.

In Search of a Fix

There are many reasons to reject the non-restrictive interpretations of the law, not the least of which .are the implications that such interpretations have for legislative acts in general. But to engage in a general examination of



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problems of statutory construal will take us too far afield[11].

During the legislative debate some of the advocates of the statute argued that one of its virtues was that it limited the patient's right to refuse medical interventions such as artificial feeding. In recommending this legislation, the conference committee consisting of Sens. Anthony Chang, Bertrand Kobayashi, Mary George and Reps. Terrance Tom, Clarice Hashimoto, Wayne Metcalf, Brian Taniguchi and John Medeiros said:

> "The bill will not permit the starving of a patient. Although the bill authorizes the withdrawal or withholding of medical procedures which will only prolong the dying process, nourishment, fluids, and medication will continue to be administered to the patient for the patient's comfort or relief[12]."

Surely the thesis sentence of this paragraph (all of which I have quoted) is clear, and subject only to one interpretation. For the ingenuous, the second sentence opens the "same door" as before, namely, that "medical procedures" that only prolong the dying process may be withdrawn or withheld (this could in some circumstances include nutrition and hydration), while nourishment, fluids, medication, etc. that provide comfort and pain relief will continue to be administered. However, given the first sentence, this strikes me as an "implausible" account. Furthermore, if the second sentence is an elaboration of the first, then this statement of the legislative intent and understanding supports the interpretation that the statute does not authorize the withdrawal or withholding of nourishment and/or fluids.

Also, the Legislative Reference Bureau in its interpretation of the statute provides a list of questions and answers about Living Wills that support the restrictive interpretation[13]. Consider the following question and response:

> **Q:** Does having a Living Will mean that the hospital could withhold food or fluids or pain relievers from me?
>
> **A:** No. You will continue receiving the food, fluids, medicines, or other procedures necessary to comfort you or relieve your pain. A Living Will only permits the withholding or withdrawing of life-sustaining procedures which artificially prolong a person's life.

Again the view is clear, life-sustaining procedures are those procedures that artificially prolong a person's life. And for the purposes of the law, pain-relief measures, food and fluids are not understood as interventions that artificially prolong a person's life.

Unfortunately, the Legislature has given us a law that is subject to conflicting interpretations on a central question. We are left with varying interpretations, even if one is more plausible than the other. I stand with the grammarians. But "grammarians trump lawyers" is not a household expression. The upshot is that physicians and citizens interested in Living Wills will remain in an interpretive limbo until the legislature or the courts settle the question.

(Continued)

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Not a Hypothetical Problem

As a medical ethicist, I have given numerous presentations on advance directives. I am often asked whether instructions to withhold artificial feeding can be part of Living Wills or Durable Powers of Attorney. The restriction in the Hawaii statute is not the last word on this question. The patient's right to refuse medical treatment is a well-established maxim of contemporary medical ethics and case law. Furthermore, provided that the patient is not pregnant and is competent, the right is an unqualified right. One can refuse any treatment. In the *Bartling v. Superior Court* case, physicians would not certify that Bartling was terminally ill, thus he could not come under the coverage of the California Natural Death Act[14]. In Bartling's case, the court determined that a competent patient has common law and constitutionally based rights (both federal and Californian) to refuse treatment. On the right to refuse artificial feeding, the Supreme Court of California, in *Bouvia v. Superior Court of California,* said, regarding the right of refusal: "Its exercise requires no one's approval. It is not merely one vote subject to being overriden by medical opinion"[15]. Furthermore, "The right to refuse treatment does not need the sanction or approval by any legislative act, directing how and when it shall be exercised[16]." In referring to Bouvia's decision to forgo medical treatment, including nutrition and hydration, the court declared that the decision belongs to her.

> "It is not a medical decision for her physicians to make. Neither is it a legal question whose soundness is to be resolved by lawyers or judges. It is not a conditional right subject to approval by ethics committees or courts of law. It is a moral and philosophical decision that, being a competent adult, is her's alone[17]."

When asked, I present the difficulty created by the Hawaii statute and take the position that those who feel strongly that they do not want nutrition and hydration administered, should, in full knowledge of the likely conflict, incorporate such language into their advance directives.

What is a physician or hospital to do when a patient presents with such an advanced directive? Some would say that this provision of the directive is invalid and thus should not be followed. The patient's agent or family will be forced to acquiesce to the Hawaii law or to pursue the question in the courts in order to obtain relief (as has been done in other states). This might be called the judicial fix.

On the other hand what would we say of a physician or hospital that went along with the patient's directive? Hospital administrators are very edgy about this prospect. From one perspective, the directive is invalid and thus the protective provisions of the law against liability are voided! But those who would object to the patient's wishes must base their objection on the State's interest in force-feeding terminal patients. I would hope that physicians and hospitals will accede to such patients' instructions, leaving prosecutors with the puzzle of whether to attempt to enforce the "State's interest"[18].

What would be the justification for initiating nutrition and hydration against the patient's wishes? Brief consideration of a narrow range of cases, where the patient's Living Will calls for the withholding or withdrawal of nutrition and hydration, may be revealing at this point.

Case 1—The condition of a patient who is receiving fluids and nutrition degenerates to the extent that his Living Will is activated. Do we follow the patient's instruction and withdraw the fluids and nutrition?

Case 2—The condition of a patient degenerates to the extent that his Living Will is activated. Do we withhold fluids and nutrition or do we initiate them?

Case 3—A competent, dying patient (who does not have a Living Will) is unable to take in adequate food and liquids and he refuses artificial nutrition and hydration. Do we initiate nutrition and hydration? Do we wait until he is unable to refuse, and then initiate the feeding?

Discussion of these kinds of cases reveals serious difficulties with the legislation. If we follow the Hawaii statute, we must provide fluids and nutrition in case 1 and 2. But the law is quite explicit in preserving the rights of those who choose not to have a Living Will. Thus the statute does not require that we initiate fluids and nutrition in case 3. In fact it supports that patient's right to refuse the intervention. Now, how is it that the patient in case 2 has fluids and nutrition imposed against his will, but in case 3 does not? Why is there a State interest in the one case but not in the other? In cases 1 and 2 the application of fluids and nutrition is being "legislated." The deciding factor is not whether this medical intervention is "medically indicated" but whether it is "legislatively indicated"! This is not the legislative "fix" that I had in mind at the outset! The legislative fix that is called for is the removal of the restrictions on the patient's right to refuse treatment. The evident unequal treatment before the law of individuals who have the same need for artificial feeding, but differ in that some have advanced directives and others do not, must be addressed. I do not envy the attorney who will have to make sense of this before the Supreme Court of Hawaii.

Some will say that the moral courage of physicians will resolve this problem. How so? After due consideration and consultations, the courageous physician will withdraw or withhold the nutrition and hydration in all three cases on medico-moral grounds. Surely, the legislation does not require medical interventions that are contra indicated. However, in this cautious, litigious age, we are likely to overestimate the moral courage of physicians. Furthermore, it strikes me as unfair of society to place physicians at risk in this way.

On the other hand there are physicians who believe that fluids and nutrition are medically appropriate in such cases. In such cases the Medical Treatment Decision Act does not serve its stated purpose, namely, "all competent persons have the fundamental right to control the decisions relating to their own medical care, including the decision to have medical or surgical means or procedures calculated to prolong their lives provided, withheld, or withdrawn"[19].

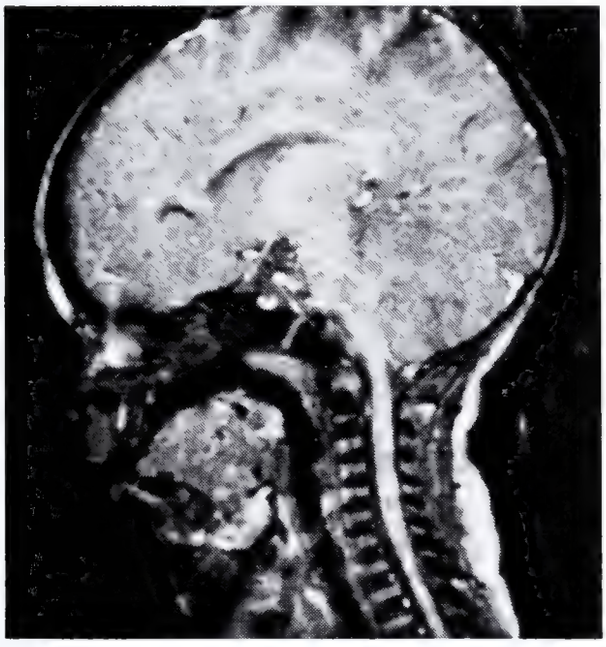
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Clinical History: This nine month old female has a central nasal sagittal cleft. No history of meningitis, CSF rhinorrhea, etc..

1



2



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Hawaii's First Case

The right to refuse nutrition and hydration has been presented to, but not faced squarely by, a court in Hawaii[20]. On June 16, 1986, Judge Kei Hirano of the Fifth Circuit Court dismissed without prejudice the case of *Wilcox v. Hawaii* with the finding that there is "no present case or controversy"[21]. Wilcox Memorial Hospital on Kauai had sought a declaratory judgment from the court to determine, (a) whether the patient was competent, (b) whether a competent patient could legally refuse artificial feeding, (c) whether the resulting death would be a suicide, and (d) whether Wilcox's compliance with the patient's wishes would constitute a violation of State or County laws. Wilcox saw itself in a double bind — subject to potential civil and criminal liability if it accedes to Mr. Doe's wishes[22] and subject to potential liability for battery if they force-feed Mr. Doe[23].

The patient, an 84-year-old widower, was supported by his children and physicians who held that the artificial feeding would only slightly extend Doe's life. The State Attorney General and Kauai County Attorney chose not to press the question. The State Attorney General is reported as saying that "while it might be nice to have a formal court ruling in a case like this, the State was unwilling to articulate a position just to create a controversy"[24]. Thus, rather than clarify the question that faced Wilcox Memorial Hospital, the State and County acted in a way that allowed the hospital to support Mr. Doe in his refusal of nutrition and hydration. This resolved the problem for Mr. Doe, his physicians, and concommitantly allowed the State to finesse the issue for the time being. It left Wilcox Memorial exposed to potential actions, but with no existing case or controversy. Judge Hirano followed a standard rule of law, that a court will not rule unless there is a case or controversy. The Court did make several findings of fact that were assented to by the attorneys for the County and State, but these carried no weight for others who will face these questions.

Mr. Doe had a Living Will that was used in the arguments before the court on the question of competence, but it was not necessary to invoke it during the course of his care, because he remained competent. One of the Court's findings is of special interest — namely that Mr. Doe's decision not to take nutrients was "a well-reasoned decision by an equally competent individual"[25]. A final interesting note is that the Wilcox case was heard on June 4, the order dismissing the plaintiff's motion was on June 16 and Hawaii's Medical Treatment Decision Act (limiting the scope of right of refusal) became effective on June 13.

Hawaii's Coming Struggle in the Courts

As pointed out above thus far, appellate court decisions in at least eight states have ruled to allow withdrawing or withholding of artificial nutrition and hydration. Similar cases are pending in at least five additional states. The *Corbett v. D'Alessandro* case is especially relevant to the Hawaii situation. The "Life-Prolonging Procedure Act of Florida" contains language that disallows "the provision of sustenance" from the procedures that can be withheld or withdrawn. The lower court held that even though Mrs. Corbett would have rejected artificial feeding in her situation, it could not authorize its withdrawal because the Florida statute would not permit such withdrawal. On April 18, 1986, the appeals court pointed out that the right to refuse treatment is a constitutional right provided by both the federal and the Florida constitutions. In the opinion of that court, "The right to have a nasogastric tube removed is a constitutionally protected right"[26], one that cannot be abridged or limited by legislation.

The words of those who must make decisions at the appellate court level may need greater exposure if we are ever to see that it is unnecessary for this process to run its course in every state. Consider the words of Judge Campbell for the appellate court:

> "We are unable to distinguish on a legal, scientific, or a moral basis between those artificial measures that sustain life — whether by means of "forced" sustenance or "forced" continuance of vital functions — of the vegetative, comatose patient who would soon expire without the use of those artificial means.
>
> "Perhaps, mainly for the satisfaction of our own consciences, we want to acknowledge that we began our deliberations in this matter, as did those who drafted our Declaration of Independence, with the solemnity and the gratefulness of the knowledge 'that all men are . . . endowed by their Creator with . . . Life.' It was not without considerable searching of our hearts, souls and minds, as well as the jurisprudence of this great Land that we have reached our conclusions.
>
> "We forcefully affirm that Life having been endowed by our Creator should not be lightly taken nor relinquished. We recognize, however, that we are also endowed with a certain amount of dignity and the right to the 'Pursuit of Happiness.' When, therefore, it may be determined by reason of the advanced scientific and medical technologies of this day that Life has, through causes beyond our control, reached the unconscious and vegetative state where all that remains is the forced function of the body's vital functions, including the artificial sustenance of the body itself, then we recognize the right to allow the natural consequence of the removal of those artificial life-sustaining measures. Thus, we conclude that the right to have a nasogastric tube removed is a constitutionally protected right. . . ."[27]

Such judicial fixes will be required in state after state until or unless the U.S. Supreme Court becomes involved, or legislatures such as Hawaii's provide a legislative fix.

In December 1987 the Supreme Court of Maine upheld a lower court ruling *In re Gardner* that nasogastric feeding be withdrawn, based upon the common law right of refusal, despite the Maine Living Wills Act[28], which specifically excludes nutrition and hydration from the life-sustaining procedures that may be discontinued. The

same issue is currently being litigated in the case of Nancy Beth Cruzan, a tragic victim of an automobile accident[29]. The courtroom of Judge Charles Teel in Southwest Missouri could just as easily be in Hawaii.

Conclusion: Call for a Legislative Fix

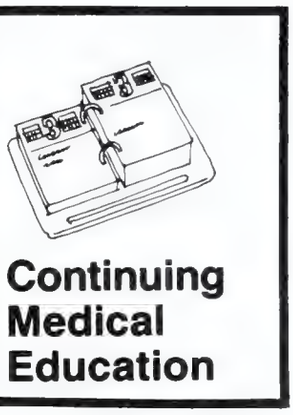
The debate over the morality of withholding and/or withdrawing of fluids and nutrition at the request of the patient is not one-sided, and I have not attempted to provide an in-depth discussion of it here. But, there is a clear, emerging, dominant position in both medical ethics and the judicial record that is starkly at odds with the Hawaii legislation. Furthermore, appeals to individual conscience and the arguments from case law provide a basis for conscientious refusal to adhere to the limitations of the Hawaii legislation. Rather than place the burden of such conscientious refusal on patients and health-care professionals, or the burden of seeking a judicial remedy on the patient and family, we need a legislative fix. The Legislature passed a law that did not reflect constitutional or common law traditions, the current thinking in medical ethics, nor the clinical judgment of the medical profession on the refusal of medical interventions such as nutrition and hydration. The statute places a burden on citizens who exercise their right to refuse treatment and on physicians and others in health care who would respect such refusals. That burden can be and should be lifted by those who placed it upon us, our legislators.

REFERENCES

1. The list of relevant court cases seems to increase monthly, but at this writing, courts in 14 states have supported the right of refusal of artificial feeding.
   1. Bouvia v. Superior Court, 179 Cal. App. 3d 1127, 1986.
   2. In re Rodas, No. 86PR139 (Colo. Dist. Ct. Mesa County Jan. 22, 1987) (Buss .J).
   3. Corbett v. D'Alessandro, 487 So. 2d 368 (Fla. Dist. Ct. App.), review denied, 492 So. 2d 1331 (Fla. 1986)
   4. In re Estate of Prange, No. 86-3398 (Ill. Ct. App. 4th Div. Feb. 11, 1988) (Jiganti .).
   5. In re Gardner, 534 A. 2d 947 (me. 1987).
   6. Brophy v. New England Sinai Hospital, 497 N.E. 2d 626, Mass. 1986.
   7. In re Culham, No. 87-340537-AZ (Mich. Cir. Ct. Oakland County Dec. 15, 1987) (Breck).
   8. Nancy Beth Cruzan v. Missouri Rehabilitation Center in Mount Vernon Jasper Co. Cir. Ct. 7-28-88.
   9. In re Bayer, No. 4131 (N.D. Burleigh County Ct. Feb. 5, 11, and Dec. 11, 1987) (Riskedahl J.).
   10. In re Conroy, 464 A. 2d 303 (N.J. Super. Ct., App. Div. 1983), rev'd, 486 A. 2d 1209, N.J. 1985.
   11. Delio v. Westchester County Medical Center, 129 A.D. 2d 1, 16-21 516 NY S 2d. 677, 689-91 (App. Div. 1987)
   12. In re Jane Doe, 16 Phila. 229 (Pa. Ct. Com. Pl., 1987).
   13. Hazelton v. Powhatan Nursing Home, Inc., 6 Va. Cir. Ct. Op. 414 (Aspen 1987) (Va. Cir. Ct. Fairfax County, Sept. 2, 1986).
   14. In re Guardianship of Grant, 109 Wash. 2d 545, 747 P. 2d 445 (1987).
2. AMA survey published in the June 3, 1988 issue of American Medical News; Current Opinions of the Council on Ethical and Judicial Affairs of the American Medical Association, 1986, Opinions 2.18 and 2.19; Principles and Guidelines Concerning the Foregoing of Life-Sustaining Treatment for the Adult Patient, 1986 Los Angeles County Medical Association and Los Angeles County Bar Association; The American Academy of Neurology has taken a position allowing the withholding and withdrawal of nutrition and hydration; American Nurses Association Committee on Ethics, Guidelines on Withdrawing or Withholding Food and Fluid 1987. See President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, Deciding To Forgo Life-sustaining Treatment, March 1982; A Report by the Hasting Center Guidelines on the Termination of Life-Sustaining Treatment and the Care of the Dying, 1987, esp. pp. 57-62; Amicus Curiae brief of the American Geriatrics Society In the Matter of Claire C. Conroy, Journal of the American Geriatrics Society, Vol. 32, No. 12, Dec. 1984, pp. 915-922.; The position of the American Dietetic Association regarding feeding of the terminally ill adult is found in American Dietetic Association 1987; 87: 78-85.
3. Hawaii Revised Statutes, Chapter 326D-1, Medical Treatment Decisions Act.
4. Ibid., Chapter 327D-2
5. For example, most recently in Maine, the supreme court ruled in In Re Gardner, No. And-87-361 (Me. 12/3/87), and in Michigan the Circuit Court in In Re Culham, No. 87-340537-AZ (Mich. Cir. Ct. 12/15/87) and in New Jersey In re Conroy, 98 N.J. 321, 486 A. 2d 1209 (1985), in Massachusetts, Brophy v. New England Sinai Hospital, 497 N.E. 2d 626, Mass. 1986, in California Elizabeth Bouvia V. Superior Courts of the State of California for the County of Los Angeles, 1986 Los Angeles Daily Journal DAR 1318.
6. Hawaii Revised Statutes, Chapter 327D-4
7. The discussion in this section relies heavily on Professors Kenith Simmons and Gerard Pilecki from the English Department, University of Hawaii at Hilo.
8. Conference Committee Report #25-86 UD, HB16688, Honolulu, HI, page 2.
9. An argument of this sort was used by the Appellate Court of Florida in Corbett v. D'Alessandro. The Florida statute has a provision which says that it is "cumulative with existing law." The Hawaii statute preserves existing rights to withhold or withdraw life-sustaining procedure in section 22.
10. The analysis of 39 Living Will laws provided by the Society for the Right to Die holds that the Hawaii statute "could be interpreted to permit withholding or withdrawing of artificial feeding and hydration." Most members of the Hawaii Medical Association's Medical, Moral, Ethical and Legal Concerns Committee, Representative Terrance Tom, and an assortment of Hawaii's legislators and lawyers are reported to be inclined to the non-restrictive interpretation.
11. The grammarians find the statute unambiguous. I have argued that to make sense of the definition of "life-sustaining procedure" the prepositional phrase "for comfort or pain relief" must apply to "medication." However, to apply it to "fluids and nutrition" is inconsistent with the conference committee report. In State v. Palama the Supreme Court of Hawaii on the question of construal of a statute ruled: "When there is no ambiguity in the language of a statute, and the literal application of the language would not produce an absurd or unjust result, clearly inconsistent with the judicial construction and interpretation, and the statute must be given effect according to its plain and obvious meaning." Hawaii Reports, No. 7117, June 8, 1980, p. 159. I conclude that unless the Legislature changes the language of the law the courts will eventually find room for judicial construction, but the construction will not be that expected by the advocates of the non-restrictive interpretation.

(Continued)

12. Conference Committee Report #25-86 JUD, HB1688, Honolulu, HI, page 2.
13. "The Living Will and You: Questions and Answers About Living Wills," Legislative Reference Bureau, June 1986, p. 7.
14. Bartling v. Superior Court (Gendale Adventist Medical Center, et al. Real Parties in Interest). 163 Cal App 3d 186 (Cal app 2d 1984).
15. Bouvia v Superior Court of the State of California for the County of Los Angeles, 1986 Los Angeles Daily Journal DAR 1318.
16. Ibid., 1318.
17. Ibid., 1318
18. With regard to medical treatment the "State's interests" are: (a) preservation of life; (b) protection of third-parties, especially minor dependents; (c) prevention of irrational self-destruction; (d) the maintenance of the ethical integrity of health care professionals and institutions; and (e) the protection of the public health and other interests.
19. Hawaii Revised Statutes Chapter 327D-1
20. Wilcox Memorial Hospital v. State of Hawaii and the County of Kauai, Civ. No. 860116, (Hawaii Cir. Ct. 5th Cir. June 16, 1986).
21. Ibid.,
22. Ibid., Was Wilcox (1) potentially in violation of Sec. 707-702 Hawaii Revised Statutes (one who intentionally causes another person to commit suicide may be found guilty of manslaughter, a Class B felony), (2) subject to potential civil actions brought by Mr. Doe's heirs for breach of a duty to aid and (3) what of other potential governmental sanctions such as withdrawal of pertinent operating licenses and Medicare/Medicaid qualification?
23. Ibid., The court record is clear that treatment performed in the absence of informed consent constitutes an actionable battery. See Cobs v. Grant, 502 P. 2d 1 (Cal. 1972).
24. "Cases in the Courts: Artificial Feeding Dominates Patient Autonomy at Issue" Society For The Right To Die Newsletter, fall 1986, p. 5.
25. Wilcox v. Hawaii.
26. Corbett v. D'Alessandro, 487 So. 2d 368 (Fla. Dist. Ct. App.), review denied, 492 So. 2d 1331 (Fla. 1986).
27. Ibid.
28. Maine Living Wills Act [1985], Maine Revised Statutes, Ann. tit. 22, Sec. 2921-2931 (Supp. 1986).
29. July 27, 1988 Judge Teel ruled that the artificial feeding could be removed. This case has been appealed, but it reverses the pattern of lower courts ruling against removal.



Continuing Medical Education

The Hawaii Medical Association does not review or evaluate the programs listed in the Hawaii Medical Journal Continuing Medical Education column and assumes no responsibility for educational value, scientific content, changes in agenda or cancellations.

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS

ONGOING

For a complete list of ongoing programs, please refer to the September 1988 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Dec. 10-17, 1988	CRITICAL ISSUES IN UROLOGY, Division of Urology, Stanford University School of Medicine. Contact: Symposia Medicus, 2815 Mitchell Dr., Suite 128, Walnut Creek, CA 94598-1622, 415-935-7889. Location: Sheraton Kauai.
Dec. 24-30, 1988	ADVANCES IN MEDICINE, Symposium Maui Inc., and co-sponsored by the Hawaii Medical Association. Contact: Paula Harrison, P.O. Box 833, Makawao, HI 96768, 808-878-6757. Location: Royal Lahaina Resort, Maui.
Dec. 26-31, 1988	EMOTIONAL GROWTH AND CREATIVITY IN ADULT LIFE, American Institute of Medical Education, 818-842-8818. Location: Kona Surf Resort, Big Island.
Dec. 27-31, 1988	MAUI ANNUAL YEAR-END REVIEW — Medical Care of the Surgical Patient, Continuing Education Society and co-sponsored by the Hawaii Medical Association. Contact: Michael Dimitrion, MD, 99-128 Aiea Heights Dr., Suite 603, Aiea, HI 96701, 808-487-6766. Location: Maui Inter-Continental Wailea.
Dec. 28-Jan. 4, 1988-89	A COMPREHENSIVE REVIEW OF OBSTETRICS & GYNECOLOGY, Perinatal Resources Inc. Contact: PRI, 1395 Grandview Ave., Suite 3, Columbus, OH 43212, 800-424-6903; 614-486-4869. Location: Hyatt Regency Waikoloa, Big Island.

(Continued on page 572)

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Jan. 9-11, 1989	UROGYNECOLOGY, American College of Obstetricians and Gynecologists, 202-863-2543. Location: Waiohai Hotel, Kauai.
Jan. 12-14, 1989	OBSTETRIC CONTROVERSIES, American College of Obstetricians and Gynecologists, 202-863-2543. Location: Waiohai Hotel, Kauai.
Jan. 12-15, 1989	RADIOLOGY: THE STATE OF THE ART, University of Washington, Dept. of Radiology; The Center for Medical Education, 800-243-5976. Location: Maui Marriott Resort.
Jan. 14-21, 1989	10TH ANNUAL ROYAL HAWAIIAN EYE MEETING, Hawaiian Eye Foundation, c/o Mary Charles & Associates, 2334 S. King St., Suite 205, Honolulu, HI 96826, 808-942-9655. Location: Westin Kauai Convention Center.
Jan. 14-21, 1989	10TH ANNUAL ADVANCES IN CLINICAL MEDICINE, PRACTICAL, CLINICAL UPDATES FOR ALL PHYSICIANS & SURGEONS, Physicians Medical Seminars. 800-334-6578. Location: Choice of hotels in Honolulu or Maui.
Jan. 15-20, 1989	HAWAIIAN SEMINAR ON CLINICAL ANESTHESIA, California Society of Anesthesiologists. Contact CSA, 1065 E. Hillsdale Blvd., Suite 410, Foster City, CA 94404, 415-345-3020. Location: Sheraton Kauai Hotel.
Jan. 15-21, 1989	14TH ANNUAL HAWAII HOSPITAL MEDICAL STAFF AND TRUSTEE CONFERENCE, Estes Park Institute, 800-223-4430. Location: Kona, Big Island.
Jan. 16-20, 1989	ANESTHESIA REVIEW COURSE, Institute for Post-Graduate Education, 619-948-8377. Location: Royal Lahaina Resort, Maui.
Jan. 16-20, 1989	HAWAIIAN SEMINAR ON CLINICAL ANESTHESIA, California Society of Anesthesiologists, 415-345-3020. Location: Sheraton Kauai Hotel.
Jan. 21-28, 1989	ORTHOPEDIC EMERGENCIES, Scripps Memorial Hospital-Encinitas and The American Institute of Postgraduate Education. Contact: Edith S. Bookstein, AIPE, P.O. Box 3586, La Jolla, CA 92038, 619-454-3212. Location: Kona Surf Resort, Big Island.
Jan. 21-28, 1989	10TH ANNUAL ADVANCES IN CLINICAL MEDICINE PRACTICAL, CLINICAL UPDATES FOR ALL PHYSICIANS AND SURGEONS, Physicians Medical Seminars, 800-334-6578, Hawaiian Island Cruise, Aloha Pacific Cruises, Honolulu.
Jan. 26-30, 1989	EMERGENCY MEDICINE: A CRITICAL APPRAISAL SERIES 2, Emergency Medical Abstracts, California Chapter, ACEP. 800-243-5976. Location: Maui Marriott Resort.
Jan. 28-Feb. 4, 1989	10TH ANNUAL ADVANCES IN CLINICAL MEDICINE PRACTICAL, CLINICAL UPDATES FOR ALL PHYSICIANS AND SURGEONS, Physicians Medical Seminars, 800-334-6578. Location: Choice of hotels in Honolulu or Maui.
Jan. 29-Feb. 2, 1989	FOCUSED SEMINAR: QUALITY OF CARE, Estes Park Institute, 800-223-4430. Location: Maui.
Jan. 29-Feb. 3, 1989	CLINICAL UPDATE IN ANESTHESIOLOGY, Tucson Hospitals Medical Education Program. Contact: Murray G. Atnikov, MD, c/o Box F110-63, Blaine, WA 98230, 604-874-5291. Location: Stouffer's Wailea Beach Resort, Maui.
Feb. 6-10, 1989	HAWAII '89: FOURTH ANNUAL ADVANCES IN PRIMARY CARE, Pacific Institute of Continuing Medical Education and co-sponsored by the Hawaii Medical Association. Contact: Mrs. Valerie Murray, P.O. Box 1059, Koloa, HI 96756, 808-742-7471. Location: Waiohai Resort, Kauai.
Feb. 6-10, 1988	FOURTH ANNUAL CARDIOVASCULAR CONFERENCE AT HAWAII, The American College of Cardiology, Program #1673. Contact: Extramural Programs Department, American College of Cardiology, 9111 Old Georgetown Rd., Bethseda, MD 20814. Location: Kohala, Big Island.
Feb. 6-10, 1989	SEVENTH ANNUAL CONFERENCE ON GASTROINTESTINAL AND HEPATIC DISEASES, The Honolulu Medical Group Research & Education Foundation and co-sponsored by the Hawaii Medical Association. Contact: Gary Glober, MD, 1380 Lusitana St., Suite 701, Honolulu, HI 96813, 808-536-1021. Location: Westin Maui Hotel, Maui.





Soldier being examined for effects of high-altitude cerebral edema.

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

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Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci)
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology:

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis, elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061088L]

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COUNCIL CAPERS

Kona House Capers (October 20, 1988)

FRUSTRATING . . . After planning our trip to Kona for the HMA's 132nd Annual Scientific Meeting and House of Delegates session and after putting in a full day's work, my wife and I boarded our favorite inter-island on-time airline. After a pleasant flight, and arriving on time, we found out that the car rental, which was reserved three weeks earlier, was not available. Disgusted (?) yes! Not only I, but almost all of our esteemed colleagues and HMA officers were in the same boat. Luckily, I maneuvered tactfully to obtain a car rental much to the amazement of my friendly delegation. . .. So off we went to the Kona Surf, while most of the others were shuttled or taxied there later.

HI-LITES . . . As usual the scientific sessions were held on Friday, Saturday and Sunday mornings; they were excellent and informative, even to a pediatrician such as myself. I must confess that I missed only two lectures, to play tennis with a friend. Prominent speakers spoke of antibiotic update, cholesterol status, anxiety and depression, interferon and others. Kudos to the scientific chairman for arranging such an informative and well-attended meeting.

HI-LITES . . . As always, in my Council Capers, my comments and reviews of the meetings are *not* official *nor* precise but only hopefully informative, and *my* personal opinion(s). It is my hope to keep every HMA member (especially Maui County members) informed of the long, dedicated and voluntary time your elected officials spend for *you*. During the past year 39 committees met 650 times, for a *total of 20,000 volunteer physician hours*, working for *you*; and this does not include the countless hours spent at the State Legislature, representing each one of us. So, I *must stress*, your membership is very important.

(Continued)

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LO-LITES . . . There has been a drop in total membership of 22 active members, but also alarming is the drop in the Medical Student/Resident membership number since last year, August 1987. Get on the ball! Your HMA is important to you, your family, your (future) practice and your livelihood. Dammit . . . join, continue and participate! We need you as much as you need us! 'Nuf said!

LIGHTS, CAMERA, ACTION . . . The House of Delegates met promptly at 1 p.m. Friday (after gulping down a quick lunch), presided over by our illustrious president, James Lumeng, who introduced our new president, Allan Kunimoto. Richard Ando, the House Speaker, controlled the meeting smoothly. The actions of the many committees were referred to three reference committees: (1) **Finance and Administration**, (2) **Public Health**, and (3) **Miscellaneous Business**. Then, these committees met in separate rooms and heard testimony from all the attending delegates, then went into executive sessions, working close to 6 p.m.

The House reconvened on Sunday at 1 p.m. and testimony, discussion and actions were taken on numerous issues and resolutions. One of the most controversial was Resolution #6 (Advertising Guidelines). After a lengthy, and I mean lengthy, discussion, it was referred to the HMA Council for action in three months. I was glad to see my two resolutions receive favorable consideration, i.e., Resolution #14 regarding the Improvement of the Quality Care of the Mentally Ill, and Resolution #15 regarding the Mandatory Testing for Blood Lead Levels in Hawaii (this was referred to the Toxic Agents Committee of HMA).

STAR BRITE . . . It was indeed a pleasure to meet and hear Dr. Alan Nelson, President-elect of the American Medical Association.

TIP OF THE MONTH: When in Kona, try to LaBourgonne; on Maui, Siu's Chinese Restaurant, and in Honolulu, the Hong Kong Noodle Restaurant. Ciao!

Denis J. Fu, MD
Councillor from Maui

READERS EXPRESS THEIR VIEWS

Medicine and politics

(From "The Weathervane: Hawaii Ophthalmological Society Newsletter", Volume 5, Number 7, October 1988)

The JOURNAL welcomes "Op Ed" views by readers. The following is submitted by former HMA president Russell T. Stodd of Maui.

The editor

When the government's remedies do not match the problem, they modify the problem, not the remedy

Meanwhile, during the reign of Ronnie, HCFA has sent out a second round of warning letters to 25,000 physicians regarding alleged violations of Maximum Allowable Actual Charge rules (MAAC). MD violators will be "encouraged" to make refunds to patients, or else they may be fined up to $2,000 per violation, and excluded from the Medicare program. We are being monitored carefully and the Inspector General of HHS is a very real big brother watching you.

I do not mind lying, but I hate inaccuracy.

A Texas ophthalmologist allegedly received $5.7 million in Medicare reim-

bursement for 1987. Anyone familiar with Medicare knows that piece of information must represent the work of many professionals and technicians, all served through the same billing name and number, and could hardly represent the work of one surgeon. Yet it generated considerable flapping of lips and literary responses. All that would be amusing, but for the fact that to the uninitiated, such as the media, that datum appears as further outrageous abuse of public funds by another black-hat, sleaze-bag, exploitive doctor. Whatever hits the fan will not be evenly distributed.

Anyone who is popular is bound to be disliked

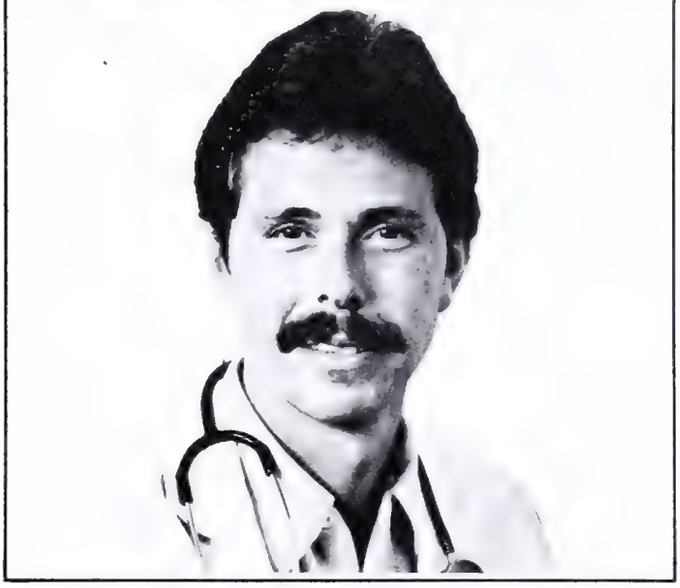
We need more judges like Circuit Judge Alice Gilbert in the state of Michigan. After a jury awarded $7 million to the parents of a brain-damaged child, the judge polled the jury, told them the award was preposterous, and that it would put the obstetrician completely out of business. She reduced the damages to $544,000. Subsequent charges brought against the judge by the plaintiff's attorney, claiming irresponsible and improper conduct, were dismissed.

And, as in uffish thought he stood, the Jabberwock, with eyes of flame, came whiffling through the tulgey wood, and burbled as it came.

The long awaited Hsiao/Harvard study of relative values for medical services is bursting upon the medical scene. Ultimately, it could be used to develop a Medicare fee schedule, although, supposedly, the Reagan Administration does not favor that. The study recommends (are you ready for this?) a reduction in ophthalmology reimbursement of 45%! Along with thoracic and cardiovascular surgeons, we are expected to accept a nearly 50% reduction in Medicare reimbursement; general surgeons are to be reduced by 20%, while orthopedists would be increased by 5%, to name a few of the proposed fee changes. ASCRS points out that all this is so much posturing at this time, but one cannot help sensing a cold breeze, because it could serve as a groundwork for some major adjustments in reimbursement.

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INSTRUCTIONS TO AUTHORS HAWAII MEDICAL JOURNAL

SUMMARY OF REQUIREMENTS

Type manuscript double spaced, including title page, abstract, text, acknowledgments, references, tables, and legends.

Each manuscript component should begin on a new page, in this sequence:

Title
Abstract and key words
Text
Acknowledgments
References
Tables: each table, complete with title and footnotes, on a separate page.
Legends for illustrations

Illustrations must be good quality, unmounted glossy prints usually 12.7 by 17.3 cm (5 by 7 in.) but no larger than 20.3 by 25.4 cm (8 by 10 in.).

SUBMISSION OF MANUSCRIPTS

Mail the manuscript in a heavy paper envelope, enclosing the manuscript and figures in cardboard, if necessary, to prevent bending of photographs during mail handling. Place photographs in a separate, smaller, heavy paper envelope.

Manuscripts should be accompanied by a cover letter from the author who will be responsible for correspondence regarding the manuscript. The cover letter should contain a statement that the manuscript has been seen and approved by all authors. Include copies of any permissions needed to reproduce published material or to use illustrations of identifiable subjects. Mail to Editor, Hawaii Medical Journal, c/o Hawaii Medical Association, 1360 South Beretania St., second floor, Honolulu, Hawaii 96814.

PREPARATION OF MANUSCRIPT

Type manuscript on white bond paper, 21.6 by 27.9 cm (8½ by 11 in.) with margins of at least 2.5 cm (1 in.). Type only on one side of paper. Use double spacing throughout, including title page, abstract, text, acknowledgments, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: Title Page, Abstract, Text, Ackowledgments, References, Tables and Legends. Number pages consecutively, beginning with the Title Page. Type the page number in the upper right-hand corner of each page.

Manuscripts will be reviewed for possible publication with the understanding that they are being submitted to one journal at a time and have not been published, simultaneously submitted, or already accepted for publication elsewhere. This does not preclude consideration of a manuscript that has been rejected by another journal or of a complete report that follows publication of preliminary findings elsewhere, usually in the form of an abstract. Copies of any possibly duplicative published material should be submitted with the manuscript that is being sent for consideration.

TITLE PAGE: The title page should contain (1) the title of the article, which should be concise but informative; (2) a short running head or footline of no more than 40 characters (count letters and spaces) placed at the top of the title page; (3) first name, middle initial, and last name of each author, with highest academic degree(s); (4) name of department(s) and institution(s) to which the work should be attributed; (7) name and address of author to whom requests for reprints should be addressed, or statement that reprints will not be available from the author; (8) the source(s) of support in the form of grants, equipment, drugs, or all of these.

TEXT: The text of observational and experimental articles is usually, but not necessarily, divided into sections with the headings: Introduction, Methods, Results, and Discussion. Long articles may need subheading within some sections to clarify their content, especially the Results and Discussion sections.

Introduction: Clearly state the purpose of the article. Summarize the rationale for the study or observation. Give only strictly pertinent references, and do not review the subject extensively.

Methods: Describe your selection of the observational or experimental subjects (patients or experimental animals, including controls) clearly. Identify the methods, apparatus (manufacturer's

name and address in parentheses), and procedures in sufficient detail to allow other workers to reproduce the results. Give references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well known; describe new or substantially modified methods, give reasons for using them, and evaluate their limitations.

Include numbers of observations and the statistical significance of the findings when appropriate. Detailed statistical analyses, mathematical derivations, and the like may sometimes by suitably presented in the form of one or more appendices.

Results: Present your results in logical sequence in the text, tables, and illustrations. Do not repeat in the text all the data in the tables and/or illustrations — emphasize or summarize only important observations.

Discussion: Emphasize the new and important aspects of the study and conclusions that follow from them. Do not repeat in detail data given in the Results section. Include in the Discussion the implications of the findings and their limitations and relate the observations to other relevant studies. Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not completely supported by your data. Avoid claiming priority and alluding to work that has not been completed. State new hypotheses when warranted, but clearly label them as such. Recommendations, when appropriate, may be included.

ACKNOWLEDGMENTS: Acknowledge only persons who have made substantive contributions to the study. Authors are responsible for obtaining written permission from everyone ackowledged by name because readers may infer their endorsement of the data and conclusions.

REFERENCES: Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals. References cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of the particular table or illustration.

Use the form of references adopted by the U.S. National Library of Medicine and used in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*.

TABLES: Each table and figure must be camera-ready, i.e., black-and-white glossy stat or velox. All copy within the table must be typeset. Desktop, computer-generated systems may be used if print quality is comparable to typeset copy. Type should be set in Helvetica. Headlines should be boldface, all capital. Subheads should be boldface, upper and lower case. All other copy should be medium face. Most tables are published 1½ columns or 3½" wide. Height should be proportional. Editorial copy is 9 pt. Copy in tables should be proportional in terms of size. Do not use screens. Tables should be bordered with thin, single line border. Number tables consecutively and supply a brief title for each. Give each column a short or abbreviated heading. Place explanatory matter in footnotes, not in the heading. Explain in footnotes all nonstandard abbreviations that are used in each table. For footnotes, use the following symbols in this sequence: *, **, †, ‡, §, |, ¶, †† . . . Identify statistical measures of variations such as SD and SFM.

ILLUSTRATIONS: Submit the required number of complete sets of figures. Figures should be professionally drawn and photographed; freehand or typewritten lettering is unacceptable. Instead of original drawings, roentgenograms, and other material, send sharp, glossy black-and-white photographic prints, usually 12.7 by 17.3 cm (5 by 7 in.) but not larger than 20.3 by 25.4 cm (8 by 10 in.). Letters, numbers and symbols should be clear and even throughout, and of sufficient size that when reduced for publication each item will still be legible. Titles and detailed explanations belong in the legends for illustrations, not on the illustrations themselves.

Each figure should have a label pasted on its back indicating the number of the figure, the name of the authors, and the top of the figure. Do not write on the back of the figures or mount them on cardboard, or scratch or mar them using paper clips. Do not bend figures.

LEGENDS FOR ILLUSTRATIONS: Type legends for illustrations double spaced, starting on a separate page with arabic numerals corresponding to the illustrations. When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend. Explain internal scale and identify method of staining in the photomicrographs.

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Peer review

I read with particular personal interest the comments in the October 1988 issue of the JOURNAL regarding how to conduct safe peer review. I believe interested and concerned physicians should read the actual words of the Supreme Court in *Patrick vs Burget*, rather than being satisfied with an interpretation of how it applies.

At the trial, Patrick was awarded an antitrust verdict against physicians who misused the peer review process in order to eliminate a competitor. In the appellate court, the finding was for the peer reviewing physicians, stating that they were immune under state law. The Supreme Court reversed this decision, based upon the fact that the state had no control over the appointment of peer review physicians and therefore the physicians were not immune under peer review laws. The Supreme Court never addressed the facts of the case but merely the legal points involved.

The above is obviously my (nonlegal) interpretation. However, to me this *does* have "a chilling effect". Either we must let the State appoint our peer reviewing physicians, or we have no legal protection that the State has allegedly afforded us under peer review laws.

The guidelines in the JOURNAL may help, but there is no guarantee that these will prevent lawsuits. I would strongly suggest that hospital bylaws be written to protect the peer reviewing physician with financial support "upfront", as has been done at Castle Medical Center.

Frank E. Ceccarelli, MD
Kailua, Oahu

The editor replies:

"Pete" Ceccarelli's remarks are well-taken. However, the item in the JOURNAL was taken verbatim from the AMA's Report MMM, and is not HMA's counsel Vernon Woo's "interpretation".

EDITORIALS

(Continued from page 552)

dress extolling the activities of AMSA. Her office has a staff of 30 and a budget of $2 million, giving us a sense of the size and work of the organization.

After welcoming speeches by Acting Dean Christian Gulbrandsen, MD of the JABSM and by Associate Dean Gwen Naguwa, MD, the keynote speaker took the podium: State Director of Health John Lewin, MD. Jack (as we know him) made an impassioned pitch for the young medical neophytes to aim high for dedicated service to humanity, not only in caring for the sick, injured and disabled, but also to focus on preventive medicine. He foresees Hawaii as a Mecca, not so much for tourists, but as a Pacific center of healthy lifestyle to be exported out to the Pacific rim.

The Hawaii Chapter, as host, enjoyed the sponsorship and support of the Hawaii Medical Association, the Dean's Office of the Medical School and the Queen's Medical Center.

At the HMA's Council meeting of November 18, Carlos Abeyta presented a "storyboard" of dark wood beautifully carved by a student, a Belauan, depicting the logo of the HMA held on high by two muscular Hawaiian Kahuna Lapa'au (students of medicine). As a symbol of the unity between the HMA and the AMSA students at the University of Hawaii, the storyboard will be displayed prominently in HMA's home.

J.I. Frederick Reppun, MD
Editor

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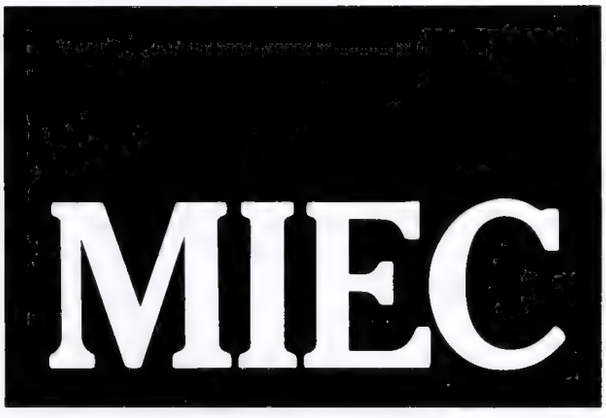
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